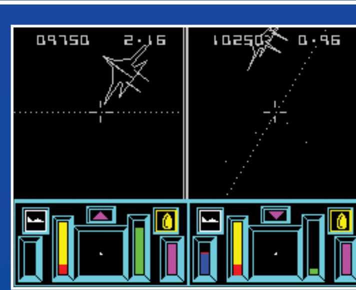
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## CREATING AN 8-BIT MASTERPIECE

THE SYSTEM THAT INSPIRED A GENERATION OF CODERS

## A FLASHBACK TO DELPHINE SOFTWARE

WE REVEAL THE HIGHS AND LOWS OF THE PROLIFIC FRENCH GAMES PUBLISHER

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## THE RETROBATES FAVOURITE SONIC GAME



### DARRAN JONES
As much as I enjoy *Sonic Generations*, *Sonic The Hedgehog 2* will always remain my favourite.
**Expertise:**
Juggling a gorgeous wife, two beautiful girls and an award-winning magazine
**Currently playing:**
*Pokémon Go*
**Favourite game of all time:**
*Strider*



### NICK THORPE
The very first one, because gaining instant momentum with the spin dash in the sequels just feels like cheating.
**Expertise:**
Owning five Master Systems (I sold two)
**Currently playing:**
*Pokémon Go*
**Favourite game of all time:**
*Sonic The Hedgehog*



### LUKE ALBIGÉS
*Sonic Adventure* has Chao Garden and Big The Cat. Why would I choose anything else?
**Expertise:**
Unstoppable *Bomberman* player and real-life Guitar Hero
**Currently playing:**
*Pokémon Go*
**Favourite game of all time:**
*Micro Machines 2: Turbo Tournament*



### DREW SLEEP
*Sonic & Knuckles*: I used to borrow this from my friend all the time in first school – we'd race to see who would complete the Knuckles campaign first.
**Expertise:**
World domination (by the way of Magikarp)
**Currently playing:**
*Pokémon Red/Pokémon Go*
**Favourite game of all time:**
*Rocket Knight Adventures*



### SAM RIBBITS
I'm torn. Like Nick, I obviously love the original, but I've also had hours of fun playing *Sonic & Sega All-Stars Racing*.
**Expertise:**
Pixels
**Currently playing:**
*Pokémon Go*
**Favourite game of all time:**
*Portal 2*



### PAUL DRURY
I have very fond memories of *Sonic The Hedgehog Pocket Adventure*. I loved my Neo-Geo Pocket and this provided a pleasant break from *Turf Masters* and *Metal Slug*.
**Expertise:**
Silas Warner's cake tin
**Currently playing:**
*LocoRoco 2*
**Favourite game of all time:**
*Sheep In Space*



### GRAEME MASON
The original, because it's the one that invokes the most nostalgic memories.
**Expertise:**
Adjusting the tape azimuth with a screwdriver
**Currently playing:**
*Dying Light*
**Favourite game of all time:**
*Resident Evil 4*

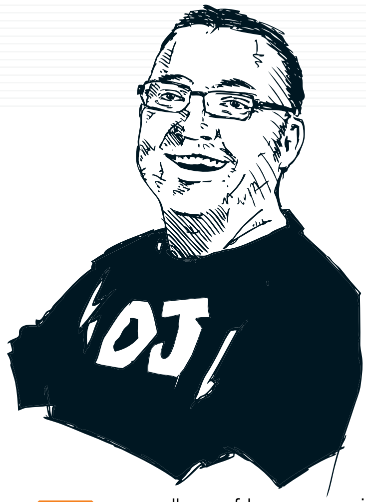


### DAVID CROOKES
The debut game. My friends and I would head out of school to Boots in our lunch break to have a sneaky play.
**Expertise:**
Amstrad, Lynx, adventures, Dizzy, and PlayStation (but is it retro? Debate!)
**Currently playing:**
*The Day Of The Tentacle Remastered*
**Favourite game of all time:**
*Broken Sword*



### JASON KELK
I'll go with *Sonic 2*, purely for the hours I put into it back in the day!
**Expertise:**
Being a homebrew hero
**Currently playing:**
*GWNN (C16)*
**Favourite game of all time:**
*Io*

# LOADING...



Regardless of how you might feel about Sega's mascot, there is no denying that Sonic is one of gaming's most iconic characters. Originally created as a counterpoint to the success of Nintendo's Mario, he quickly gained a hit following, representing everything that was cool about videogames.

Like Mario, he spun off into lots of different genres beyond the platformers he first featured in, and he's also appeared on countless pieces of merchandise and starred in his own comics and TV shows. He's become a huge success, and has a following of loyal fans, including our very own Senior Staff Writer, Nick Thorpe.

As Sega has just announced two new games to celebrate Sonic's 25th anniversary, we've decided to feature two awesome Sonic features. The first has exclusive input from Sonic Team's Takashi Iizuka, who has been an instrumental cog in the *Sonic* machine for years now. The second, March Of The Mascots, looks at the many, many similar anthropomorphised critters that followed in Sonic's wake.

And don't worry, if you're not a fan of the blue blur, we've got plenty more great features for you, including articles on *Slap Fight*, 35 years of the ZX81, *Top Gun*, *Inside Outing*, *Super Smash Bros.* and much, much more.

Enjoy the magazine!





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**>> Load 158** Breathing new life into classic games

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**"The real joy of Super Smash Bros. is found in its versatility"**



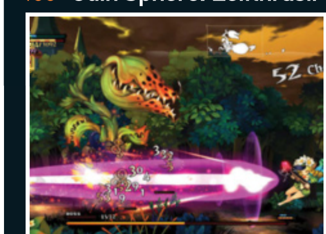




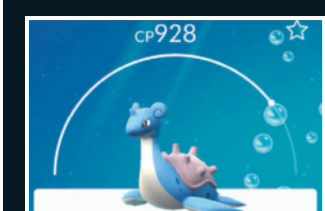



## REVIEWS












## ESSENTIALS







# A SHOCKING COMEBACK

## Nightdive Studios' Stephen Kick on remaking the PC classic, System Shock

✱ CONTENTS



The 1994 PC game *System Shock* might not have been the biggest commercial success of the Nineties, but it's a game which is still held in high esteem over two decades later. Cast as a hacker, players were tasked with navigating a mutant-infested space station with the goal of bringing down the rogue artificial intelligence, SHODAN. The game's DNA can be seen in a variety titles, as well as its own sequel and spiritual successors.

Thanks to Nightdive Studios and a successful Kickstarter campaign, the original game is now being remade for PC, PS4 and Xbox One, with the goal of launching in 2017. We spoke to Nightdive Studios' CEO Stephen Kick to find out about the project, and what players can expect from their return to Citadel Station.

**What prompted the decision to reboot the *System Shock* series?**
Over the last few years Nightdive has specialised in tracking down lost and forgotten games and rereleasing them on digital platforms. As our team size grew so did our ambitions – instead of just releasing the game as it was, we started enhancing some select titles. When we acquired the rights to the *System Shock* franchise our priority was to rerelease the first *System Shock* with a number of improvements to make it more accessible for modern gamers. During this opportunity the team replayed the game a number of times and the discussion became, 'This game from 1994 still holds up, we have the rights, let's remake it!' We felt that *System Shock* deserved it, the design, enemies and atmosphere would be a challenge to translate but once we signed on Robb Waters, the original concept artist, momentum started to build. The passion required to remake the game was there.

**What aspects of the original game are you looking to retain?**
The most important aspects we want to retain are the atmosphere and the feeling

### READER'S REACT
**Have you tried the System Shock demo? What did you think?**

Tried the demo, short but sweet. They recaptured the look and feel of the original well whilst tailoring it for a modern audience.
**outdated_gamer**

A poor man's *Bioshock*, one to be avoided.
**HalcyonDaze00**

I loved the original and hope the success of this one will pave the way for *System Shock 2* being remade. I don't have Steam so haven't played the demo, so I'm kinda going in blind.
**tachi**

I thing it looks great... but there was something about the old chunky models that helped the spookiness of the original a lot more
**@OnetrueJohn**

I did, like it a lot.
**@Kitsuagi**

Still need to give it a go. Would love to back it however worried about the system requirements changing over time.
**@Grizzlykreiden**



» [PC] Looting corpses is a tradition of *System Shock* and its descendents.


» [PC] The dark environments of the original game have been well-preserved in the remake so far.


» SHODAN features on the boxed edition of the game… looking as terrifying as ever.


» [PC] Up-close combat should look a lot nicer without the blocky sprites of old.

## "Terri Brosius has reprised her role as SHODAN and Eric Brosius will be engineering her voiceover"
Stephen Kick

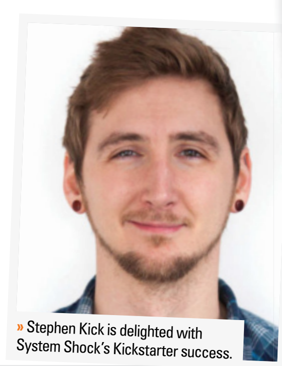
of dread and isolation as the chilling narrative slowly unfolds. Other aspects include the overall aesthetics of the Station, the level design, dynamic lighting, the weapons, and the horrifying creations of SHODAN that lurk within the corpse-filled hallways. Once again, by bringing on Robb Waters we've created a very familiar thread that runs between all the *Shock* games – our remake fits within the world that was established over 20 years ago and it's something only a member from the original team could provide.

**Beyond the new visuals, what changes have had to be made to bring *System Shock* up to modern game design standards?**
The most important thing we wanted to change was how the player interacted with the world and how they received information from the interface. Both of those high-level mechanics were completely updated from the original and while nothing in the demo is final, we feel like we've accomplished designing a functional interface and interaction system that's easy to use and provides an appropriate amount of depth and complexity. We definitely took more than a few cues from *System Shock 2* in this regard. Another big change is movement. The original game had no native mouse look so just navigating the game world was challenging and frustrating, especially while under attack. By simply implementing a standard control and movement scheme the world of *Shock* is suddenly accessible and interacting and exploring the Station opens up new possibilities for our designers.

**How much input do you have from the original *System Shock* team?**
Beside Robb Waters being an active team member we've had the opportunity to consult with Paul Neurath, Warren Spector and Austin Grossman who were team members on the original *System Shock*. They've provided valuable feedback on our efforts to ensure we maintain the legacy of *System Shock*. Also, Terri Brosius has reprised her role as SHODAN on the project and Eric Brosius will be engineering her voiceover to give it the iconic resonance and distortion that we all remember.

**This is the first time Nightdive has turned to Kickstarter – what prompted you to go down the crowdfunding route?**
When Kickstarter was first used as a way to crowd fund the development of a videogame I saw the potential to bring *System Shock* to the platform. There are thousands of passionate fans of the series and it would give us the opportunity to interact with them directly from the very beginning and rebuild the community from the ground up. Unfortunately, when we were ready to launch the project the crowdfunding scene had become pretty tumultuous and we knew we'd have to do something to stand out and engage with the community in a way that would build trust and confidence. This would be our first project that wasn't a rerelease or remaster and even though our team is composed of triple-A veterans it would be tough for our backers to gauge what we're capable of without an example, and so I invested a considerable amount of resources into creating a demo that represents what we're aiming for in the final release. The goal was to allow the player to experience the first 10-15 minutes of the game as feature-complete as possible and hopefully leave them wanting more.

**What do you think will be the most exciting thing about the new *System Shock* for existing fans of the series?**
I think the most exciting thing for existing fans will be the opportunity to explore Citadel Station in a whole new way. The original game is still a masterpiece, but it's definitely showing its age and I think after more than 20 years we're ready for a new *System Shock* game, even if it is a remake of the first title. The feedback we received from long-time fans of the series on the demo has been extremely positive and we're off to a great start. We're really looking forward to having them continue to contribute their ideas, thoughts, and concerns as we continue the game's development. *


» Stephen Kick is delighted with System Shock's Kickstarter success.


» [PC] *System Shock 2* was a critical success, but that didn't translate into good sales, sadly.

## THE SYSTEM SHOCK LEGACY

**System Shock has inspired some strong games…**

### System Shock 2
The 1999 sequel to *System Shock* actually started life as *Junction Point*, a spiritual successor to the original game in which your goal was to take down a mad commander aboard a spacecraft. However, it became the official sequel to *System Shock* when signed up by Electronic Arts. Despite critical acclaim it struggled commercially, failing to reach 60,000 sales within eight months.

### Deus Ex
Warren Spector served as producer on *System Shock*, and at Ion Storm he produced another sci-fi action-RPG played from the first-person perspective. JC Denton's adventure proved popular with both the press and public, racking up positive reviews and awards as well as topping a million sales. The fourth major entry in the series, *Deus Ex: Mankind Divided*, will launch soon.

### Bioshock
*System Shock 2*'s lead designer Ken Levine revisited the formula in a decidedly less futuristic fashion with *Bioshock*. The retro sci-fi scenario saw players exploring the underwater city of Rapture, a society driven mad by DNA alteration and brought to war over class division. The game was wildly successful, earning excellent review scores, over 4 million sales and two sequels.

### System Shock 3
Nightdive Studios has licensed the *System Shock* rights to OtherSide Entertainment, which is currently producing a new entry in the *System Shock* series. Warren Spector joined the team in February 2016 and will be working on the new game, but little is known about it other than that – save for the return of SHODAN, the series' antagonistic artificial intelligence.




# NINTENDO MINIATURISES ITS CLASSIC CONSOLE

## REVISIT CLASSIC 8-BIT GAMES WITH THIS NEW NES

The Nintendo Entertainment System is one of the best-loved consoles of all time, shifting nearly 62 million units across the world. First released as the Famicom in 1983, a huge number of critically successful franchises originated on the system, including *Dragon Quest*, *Super Mario Bros.*, *The Legend Of Zelda*, *Fire Emblem*, *Final Fantasy*, *Metroid*, *Castlevania* and many others. It reinvigorated the US market after its infamous crash (which wasn't even felt here in Europe) and introduced gamers to the lovable, but flawed, R.O.B. which came with early versions of the system when it was released in the West.

Nowadays, the NES is highly collectible, both with those who grew up with the system and others that simply love everything Nintendo. Services like the Virtual Console have introduced gamers to a large number of its titles, and its popularity shows no sign of slowing. In fact, prices for NES games are getting quite ridiculous at the moment. A boxed *Metroid* can go for as much as £100, while even widely-released games such as *Donkey Kong* and *Super Mario Bros.*, can still go for a decent amount of cash if they're complete.

If you're not prepared to spend hundreds of pounds on classic games, Nintendo is releasing an impressive alternative later this year. The Nintendo Classic Mini: Nintendo Entertainment System will be released in November and is a replication of the NES that will include 30 built-in games. The list is impressive, and covers a range of companies, including Nintendo, Capcom, Konami and Square. While obvious releases like *Metroid*, the first three *Super Mario Bros.* games and *The Legend Of Zelda* will be included, it also features classics such *as Bubble Bobble*, *Mega Man 2*, *Final Fantasy* and *Castlevania*.

Retailers are charging £49.99 for the actual system and an additional £7.99 for a second controller. Nintendo's miniature NES also features HDMI output, the ability to continue playing from wherever you left off, but no way of adding additional games to it, either via the internet or a storage system. Small enough to fit into the palm of your hand, this mini NES looks like it's going to be a fantastic way to play NES games. Here's hoping we'll see other Nintendo Classic Mini systems in the future, including the SNES and N64. You can expect a review of the system later on in the year.



» [NES] Sadly, the superior third *Castlevania* game isn't available on Nintendo's new collection.







## BLOOD MONEY

### Richard Garriott starts selling his blood online

No, you've not read that wrong. Richard Garriott, the creator of *Ultima* and the only games developer we know of to have gone into outer space, is currently selling phials of his blood online.

Richard was initially selling his life essence via eBay, but it was quickly taken off sale due to eBay's 'human remains and body parts' policy. An undeterred Richard instead decided to sell his somewhat grisly gift to the world on the *Shroud Of The Avatar* online store. All phials are sold in the name of charity and range in prices from $6,000 to £13,000. Richard (under his *Ultima* pseudonym of Lord British) isn't the only developer selling blood for money, as producer Starr 'Darkstarr' Long, who helped on *Ultima Online*, also has phials up for sale, with 10 per cent going to charity.

While several phials have already been sold, it's also worth noting that the purchases include various other items to be used in Garriott's new game, *Shroud Of The Avatar: Forsaken Virtues*, including studio tours, property deeds to an online castle, elemental pets and other goodies depending on the package bought.





» It sounds pricey, but the package comes with all sorts of digital extras for Richard's new game.




**Here's my bio... Paul Davies**

In 1992 I started out on *Mean Machines Sega* and *Nintendo Magazine System*. In 1995 I became editor of *C&VG*. I led the *C&VG* website from 1998 until Christmas 2000, then I left journalism to be concept design manager at Criterion Games. I returned to journalism in 2002 and from 2005 I've been running my own company, Unlikely Hero.

# I Have This Under Control

My wife's aunt was brilliant at *Pac-Man* back in her day. She would've been god-awful at *Banjo-Kazooie* back in my day, though. And don't even mention *Overwatch*. It's time to face the truth!

A developer friend told me this week that a US governor had dropped by the E3 booth to play his latest game. This US governor, to nobody's great surprise, had never touched a videogame. He didn't know the first thing about what the buttons or sticks did. He knew how to shoot a duck, though, and probably offered this as his, 'Cuz I have a life' statement.

*Pac-Man* used one stick. It goes up, down, left and right. *Pac-Man*, the little yellow ball with a mouth guy, goes up, down, left or right in direct correlation to the stick. Somebody may need to explain to you that the large dots, in the corners of the map, are what allow the dude to eat the ghosts. Oh, and that he'll move faster than the ghosts through the tunnel. That's kind of it. It's up to you how many coins you want to drop into this thing. Be careful, though, because it's probably going to be lots of coins. In fact, walk away. Walk away now.

*Overwatch*, today's *Pac-Man* as far as I'm concerned, has 21 different characters to choose from. Before you even begin to move them around without bumping into things and feeling sick, you've got to learn how to move a virtual viewpoint around in full 360°. It's cool, because you can move while looking, and it's only two sticks that do this. But, while you are doing this, you will get shot at and die, causing incredible upset to a fellow team comprising five more people that want to hold a conversation with you via a headset. Yes, you need a headset or you can't hear them. You don't want to hear them? You need to hear them.

Okay, so with *Overwatch*, X is jump, right-trigger is fire, left trig... the right trigger is this thing under your right finger. Yes, your forefinger! Use your thumb on X to jump. Pressing the right stick makes you melee – that means you punch people. Which one is better to try first? Probably jump to begin with.

My wife wanted to play *Uncharted 4* this year. She had a couple of obstacles to face, the first of which isn't really fair: it's my PS4, and I don't want my controller to smell of grapefruit hand-lotion. But, assuming that I'm happy to let her get on with this, she wouldn't stand a chance beyond the title screen. Sony has done a great job of convincing somebody who usually only plays *Norah's Sandwich Cafe*, or does something proper like gardening, to stop and think that they needed a PlayStation experience in their life. Then left the dirty work to me. That is, the explaining. The hand-wringing over whether or not to entrust my PlayStation to the a dangerous outsider, responsible for dropping a bowl of udon soup onto my Super Famicom years ago.

Games are not for everyone. VR is only going to make matters worse, as regular people puke while you and I soldier on and swallow it down. But, we can and shall survive. *



## What do you think?

**Do you agree with Paul's thoughts? Contact us at:**

RetroGamerUK @RetroGamer_Mag retrogamer@imagine-publishing.co.uk www.retrogamer.net/forum



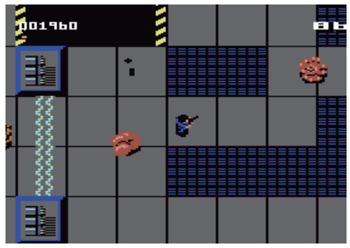
# Rewriting The Past

Coder Jason Daniels tells us how he returned to the C64 to fix his game 27 years later...

**Where did your idea for *Die! Alien Slime* originate from?**
*Aliens*, the 1986 movie by James Cameron and, to a much lesser extent, *Alien Syndrome* the 1987 arcade game, also heavily influenced by the Cameron movie.

Actually, the *Alien Syndrome* associations really worked against *Die! Alien Slime* as people viewed it as a poor clone of that game. In fact, despite some cosmetic similarities, they are very different games. *Die! Alien Slime* is an exploration and mapping game with puzzle elements and, for the time, had a very sandbox feel. Whereas *Alien Syndrome* was a hard and fast arcade shooter.

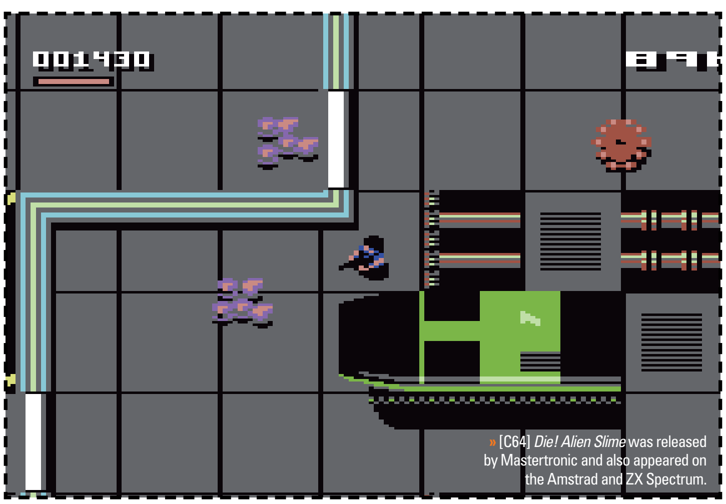
**The bug that was found in the 1989 release made the game crash when you entered a elevator. Where did it come from if it wasn't in the original code?**
It turned out, after months spent retrieving, reassembling and analysing the code from the original published cassette version (my original development files were long gone), the error was down to five corrupted bytes in the SID code. I don't know for sure but I suspect there was a power spike or a fault in the oxide during the mastering process. I do know the game we gave Mastertronic in 1989 was tested and fully working.



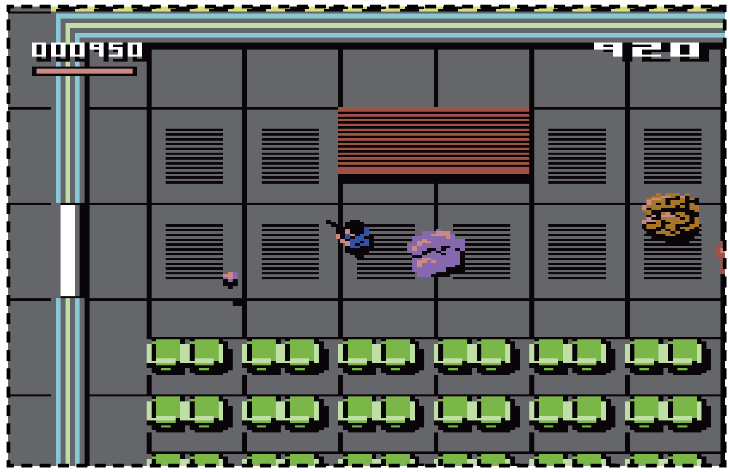
» [C64] It can be tough to fight through aliens when they're all intent on blocking your path!

**What made you want to return to the game and fix it?**
Tom [Lanigan, the graphics artist] and I discovered the fault around 2012 and I vowed to fix it one day. I have wanted to get back into C64 coding for many years but life had a habit of getting in the way. Then towards the end of 2015 I found myself in a position to put some time into it. I fired up my old PDS development system and my Commodore 128D and dived in, if only I had known what I was getting into! Still, it's very satisfying to have finally fixed *Die! Alien Slime* and to know that there is a fully-working version out there.

> “It was a case of slogging through the code, with a few bug-catching tricks, to track down and correct the error”
> Jason Daniels



» [C64] *Die! Alien Slime* was released by Mastertronic and also appeared on the Amstrad and ZX Spectrum.

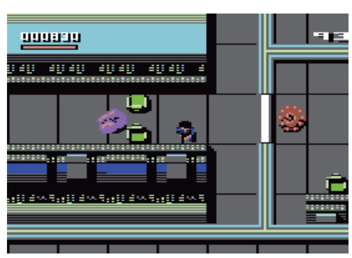


» [C64] Often, running away from the infinite amount of respawning enemies is the best way to deal with them.

**What was it like working in the industry at that time?**
Tremendously exciting, you really felt like you were part of something groundbreaking and important. Unfortunately, despite our talent for designing and creating the games, we were pretty hopeless when it came to the business side, so we never made much of a living out of it.

**What was it like returning to coding after such a long break?**
Not too bad, actually. I first had to learn again the intricacies of using the PDS development system but once I had reconstructed all the game's code I found that my C64 knowledge was still there, just deeply buried. Of course, still having all my original programming reference books helped quite a bit.

**Without getting too technical, how did you solve the problem?**
Most of the work went into retrieving all the code from the published cassette and reconstructing the code in an understandable fashion on my PDS. Then it was a case of slogging through the code, with a few bug-catching tricks, to track down and correct the error.



» [C64] *Die! Alien Slime* has a stronger emphasis on exploration than games such as *Alien Syndrome*.

**Is it possible for readers to play your new version of the game?**
The fixed version of the game, *Die! Alien Slime 2016*, can currently be downloaded as a .d64 file from the Pagoda Software website (pagoda-software.com). It's also available in the series of articles I wrote for the C64.com website describing the game fix in detail. An updated and expanded version of the game's instructions are also available on the same webpages and I would strongly recommend reading them before attempting the game.

**Are you still connected to the games industry? What are you currently doing?**
Not on a professional basis. Pagoda Software (Tom Lanigan and myself) have an active Facebook page discussing our past work and our current activities (like fixing *Slime*). We also have a long association with the C64.com website run by Andreas Wallstrom, on which Tom and I have both participated in interviews and I have written a series of articles about fixing *Slime* and about our unpublished game, *Autoguard*.

Currently, in addition to looking after my family and being the main carer for my disabled daughter, I am writing a novel.

I hope to carry on coding for the C64 as a hobby. In fact, I am in the early stages of working on finishing the unpublished Pagoda Software game, *Autoguard*. ✱


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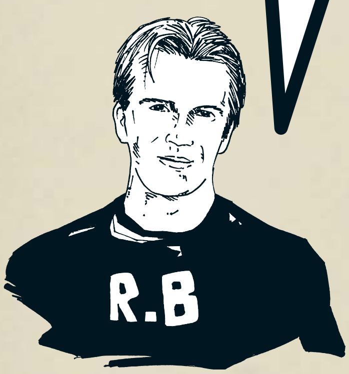
# BACK TO THE NINETIES



[PlayStation] *WipEout* once again tormented your reflexes with its fast speed and tough opponents.

# THE LATEST NEWS FROM SEPTEMBER 1999

**SEPTEMBER 1999 – Dreamcast debuts, GTA2 kicks off, Final Fantasy VI returns, Tiny Tank shells out, WipEout 3 checks in and a trio of Sega coin-op weirdness arrives. Richard Burton fumbles for loose change…**




**Sega's Dreamcast console finally hit retail in North America this month, priced at a competitive $199 with other territories launching the device in the following weeks.** Complimenting the successful launch was a healthy roster of 19 games, including favourites such *as The House Of The Dead 2*, *Sonic Adventure*, *SoulCalibur* and *Ready 2 Rumble Boxing*.

Sega's carefully-executed marketing plan saw the Dreamcast sell over 225,000 units in the first 24 hours from launch. Sales grew steadily with 500,000 units sold after the first two weeks and a million shifted after two months.

It was an astounding start to the Dreamcast's life, yet as promising as the launch was, its decline and discontinuation was even more spectacular. Just 15 months after the UK release the Dreamcast was discontinued with Sega pulling out of the hardware market to focus its energy at being a third-party software developer.



[PC] Despite graphical similarities to the original, *GTA2* was solid fun in an open world.

DMA Design and Rockstar Games brought us more action adventure open-world gaming with *GTA2* on PC. Your play area, Anywhere City, was split into three districts explorable by vehicle or on foot, all with the familiar top-down camera view. Criminal activity plays an important part and there are seven different gangs you can do work for.

There were several improvements over the original release. Pedestrians and vehicles had more interaction rather than being merely cosmetic. Also, doing a job for a gang would previously only incur the wrath of the police. Other gang leaders can feel aggrieved towards you and react accordingly.

There was no shortage of hidden features, bonuses, weapons and side missions and the dual-mode option allowed day or dusk gaming. This added to the atmosphere to its world, particularly with the darker hues and vibrant lighting in dusk mode.

Squaresoft's *Final Fantasy VI*, a port of the 1994 SNES game, arrived on PlayStation. The well-established role-playing series sets the sixth instalment in a steampunk-esque world and with 14 playable characters to utilise. Your gang of rebels takes on the Empire and its evil Emperor, although *Star Wars* this is not.

The strong role-playing system, smooth menu-driven combat element, complimented by some lovely graphics and a superb soundtrack made *Final Fantasy VI* a special game from beginning to end. The involved storyline drew you in further with the intention of creating an emotional attachment to its characters. It's a shame this port suffered from dire loading times, then.



[PlayStation] *Tiny Tank* may just look like a standard action game but appearances can be deceiving.

If you fancy a Sherman then seek out *Tiny Tank*. This third-person shooter game, a PlayStation exclusive, featured a wise-cracking yellow robot tank character with attitude galore, tasked with saving mankind from a robot army controlled by the evil leader Mutank.

There was 25 levels of platform action to enjoy with a further 12 mission-based levels complete with obligatory end of level boss. While not strong on originality, *Tiny Tank* played extremely well.

More serious, more involved but just as playable was the newly-released *FreeSpace 2* by Interplay for PC. The space combat simulator saw you protecting Earth and humanity, aided



# THIS MONTH IN…

## DC-UK

With the NA launch of Sega's Dreamcast, with Europe following suit a month later, it came as no surprise to see publishers enthusiastically jumping onboard the Dreamcast love train. Future Publishing introduced us to *DC-UK*, a strong-selling title which mirrored the Dreamcast's lifespan, closing after 20 issues.



## OFFICIAL DREAMCAST MAGAZINE

Dennis Publishing also joined the great Dreamcast party with the officially-licensed magazine of the console. With a covered-mounted disc featuring demos and, occasionally, actual games, *ODM* had the edge in terms of sales over *DC-UK*… but only just. *ODM* was pulled after 21 issues after going bi-monthly.

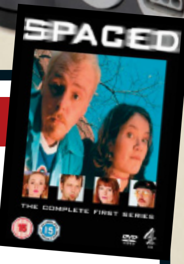


## COMPUTER & VIDEOGAMES

Among the big releases *C&VG* reviewed was a compilation that deserved attention. Entitled *Capcom Generations* the set featured some of the best of its coin-op output including *Ghosts 'N Goblins*, *1942*, *Commando* and *Vulgus*, a space-based 2D vertically-scrolling shooter.



## NEWS SEPTEMBER 1999



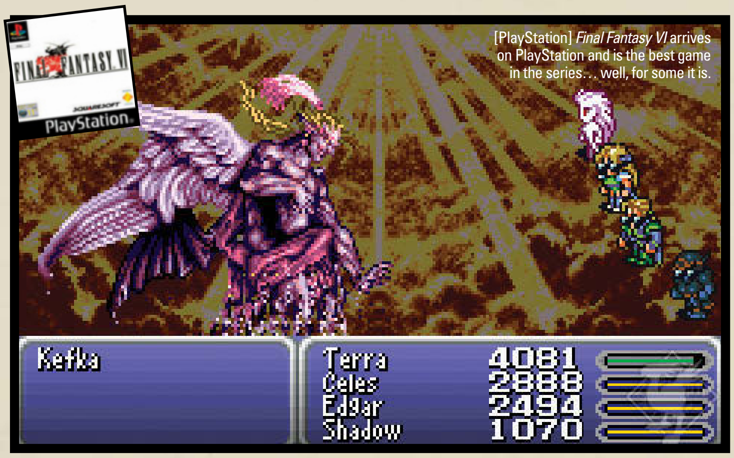
21 September saw David Bowie's new album, *Hours*, become the first complete album by a major artist to be made available for download before the physical release was commercially available. The CD and vinyl iterations arrived two weeks later.

September's other physical album releases were plentiful with the highlights being *Only Yazoo* (Yazoo), *The Ultra Zone* (Steve Vai), *Metalhead* (Saxon), *Supergrass* (Supergrass), *Q2K* (Queensryche), *XXX* (ZZ Top), *Brand New Day* (Sting), *The Ladder* (Yes) and *Temperamental* (Everything But The Girl).

3 September saw the return of the Seventies game show *It's A Knockout*, this time hosted by Keith Chegwin and incapably assisted by Frank Bruno and Nell McAndrew. Airing on Channel 5, it lasted just two series and was widely derided. The first series final pulled in just 500,000 viewers.

Television deteriorated with the debut on 6 September of topical panel show *Loose Women* on ITV but recovered slightly with the introduction of the children's favourite, *The Tweenies*, on BBC 1 on the same day. 'It's song time,' rang out like a call to prayer for children everywhere.

Thankfully TV attained some respectability when Channel 4 aired *Spaced* on 24 September. Written and starring Simon Pegg and Jessica Stevenson, aided and abetted by Nick Frost, the comedy series looked at the worries, woes and boredom of everyday life interlaced with references to pop culture. *Spaced* enjoyed a cult following despite a relatively short lifespan lasting just two series of seven episodes each.

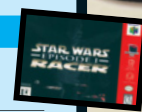



[PlayStation] *Final Fantasy VI* arrives on PlayStation and is the best game in the series… well, for some it is.

# CHARTS

## SEPTEMBER 1999

### NINTENDO 64



1. Star Wars: Episode I Racer (Nintendo)
2. Star Wars: Rogue Squadron (Nintendo)
3. The Legend Of Zelda: Ocarina Of Time (Nintendo)
4. Quake II (Activision)
5. F-1 World Grand Prix II (Video System)

### PLAYSTATION



1. Civilization 2 (Activision)
2. Metal Gear Solid (Konami)
3. FIFA 99 (Electronic Arts)
4. UEFA Championship Manager (Eidos)
5. Rugrats: Studio Tour (THQ)

### GAME BOY COLOR



1. The Rugrats Movie (THQ)
2. The Legend Of Zelda DX (Nintendo)
3. FIFA 2000 (Electronic Arts)
4. Wario Land 2 (Nintendo)
5. WWF Attitude (Acclaim)

### MUSIC



1. Mambo No. 5 (A Little Bit Of…) (Lou Bega)
2. Blue (Da Ba Dee) (Eiffel 65)
3. The Launch (DJ Jean)
4. We're Going To Ibiza! (Vengaboys)
5. (Mucho Mambo) Sway (Shaft)

by the Vasudan alien race, against the furtive Shivans aliens.

You pilot your ship with customisable cockpit and heads up display from a first-person viewpoint. Select your ship, weapons, learn your objectives and begin your mission. While the gameplay was linear with no branching, there are smaller missions to complete. The storyline is progressed with nicely-designed prerendered cutscenes which established the narrative well.

While critics argued that the game was essentially the original, but with bigger ships and weapons, the graphics and sound were sharp and refined with the playability to match. As space combat games go, *FreeSpace 2* was one of the best.

Coin-op releases were sparse this month, but Sega mustered a trio of fascinating games. First up was *Toy Fighter*, a *Street Fighter*-like fighting game with the usual mix of special moves and weapons. Unusually, the characters were based on action figures, dolls or soft toys and while it was fun in the short term, the novelty wore off quickly.

Sega's second offering was *Jambo! Safari*, a refreshingly different game with unique gameplay. You select your park ranger character and vehicle tasked with capturing and caring for specified wild animals such as giraffes and zebras all of which roam free in an open world savannah setting. Capturing involved lassoing the target from your vehicle and bringing it back to base for tagging or treatment. Lassoing the target was hard enough, bringing the animal under control while managing the rope tension so that it didn't break was harder still.

Lastly there was the arcade curio, *The Typing Of The Dead*, a modified version of the rail shooter *The House Of The Dead 2*, released in 1998. Rather than blasting zombies with your light gun your weapon of choice was the keyboard. As zombies attack a word would appear by them which you must type as quickly as possible to kill or repel them. While sounding absurd, *The Typing Of The Dead* worked surprisingly well.

Psygnosis and Sony brought us *WipEout 3* on the *PlayStation* for more fast racing laced with heavy weaponry. Energy shields absorb hits from your aggressive competitors while mines and missiles can be employed to knock out their shields and knock them out of races.

*WipEout 3* had many improvements over earlier incarnations, not least the full-frame hi-res graphics, and, mercifully, the difficulty levels had eased off. Sadly, any gameplay leeway was snatched back by the improved artificial intelligence of your opponents and their accurate attacks turning the learning curve back to a 90° angle.



[Arcade] *Toy Fighter* from Sega was essentially *Street Fighter* with toys… except it wasn't half as good.

Split-screen two-player and tournament modes were also welcome additions, but there was an overriding sense of *WipEout 3* being just more of the same with nicer shinier graphics. *

retroGAMER.net READER'S REVIVAL

# Army Moves

## "I WANTED A MISSION, AND FOR MY SINS, THEY GAVE ME ONE"



#103

» DINAMIC » MSX » 1986

**This is a sideways-scrolling shoot-'em-up that is quite literally a game of two halves.** During the first four levels you drive a Jeep or pilot a fighter jet against some Nazi-like enemy which possesses a fleet of helicopters and Jeeps. You must destroy the vehicles while making your way to the end of the level. The game is repetitive, difficult and inconsistent. Whoever wrote the collision detection routines was clearly drunk or had instructions to 'relax the rules a little' as this game would be impossible without the harmless brush with an enemy helicopter.

The second set of levels places you on foot, traversing some South American swamp. Your main enemies are birds, grenades lobbed casually from the jungle, and the swamp itself into which you can fall as you jump between patches of dry land. From the jungle you make your way through a large number of enemy soldiers to the headquarters of the evil mastermind behind the affair. A few screens later, you reach a safe and your mission is complete. That's it. No end of game baddie, no fanfare, nothing.

The collision detection in the second half of the game is just as bad as in the first half, and the limited colours make it difficult to see what's going on. Why I persevered to the end, I'm not sure.

This was yet another cheap port of the Spectrum version of the game to the MSX. No use of the enhanced colours, limited use of the superior sound and no effort to make the game unique for the platform. It has the feeling that the game was knocked out in a hurry, on a budget and with no passion – which it probably was. *

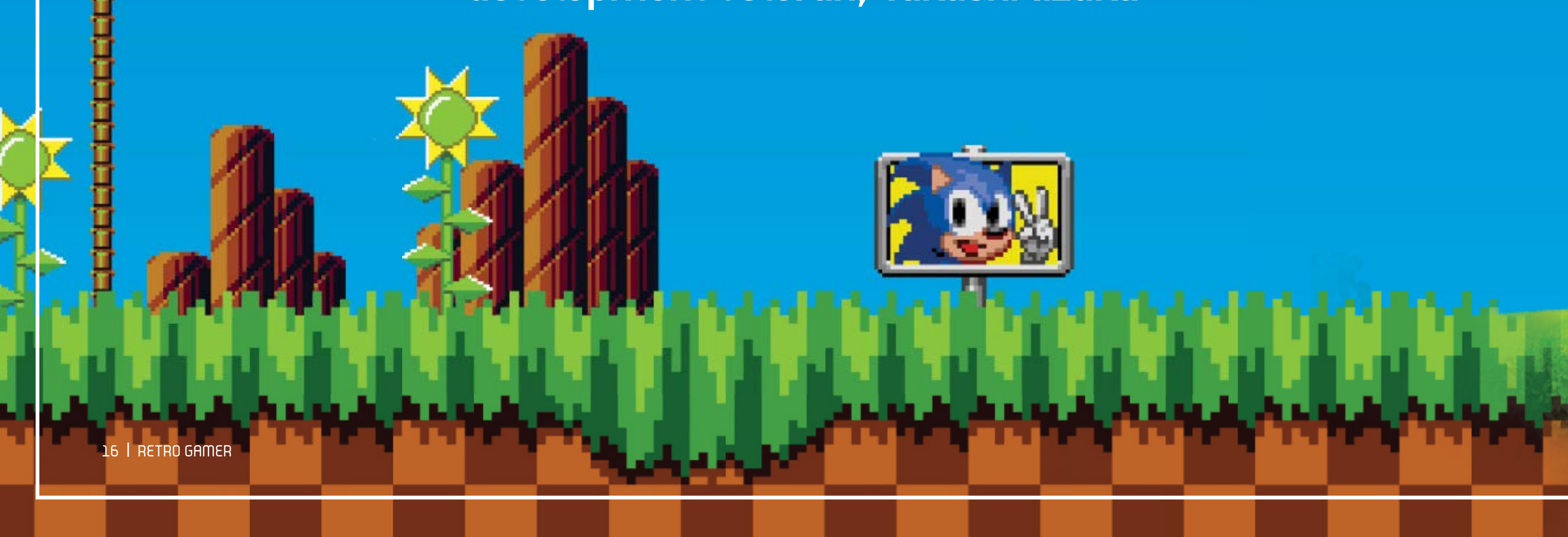
**GRAHAM TUTT**


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# 25th Anniversary Sonic the Hedgehog

**With a quarter of a century now behind Sonic, Nick Thorpe looks back at the impact of the original Mega Drive platform games with Sonic Team head and Mega Drive development veteran, Takashi Iizuka**



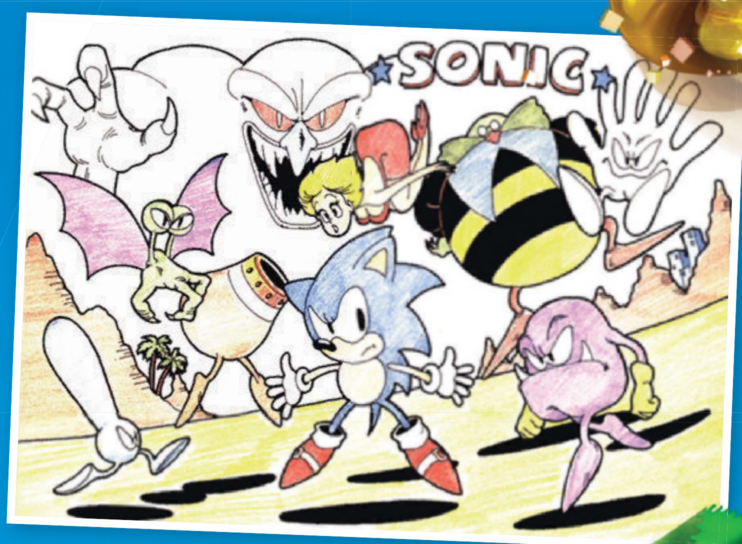
**There aren't many games that could be described as revolutionary, and far fewer series – yet the quartet of *Sonic The Hedgehog* platform games on the Mega Drive can justifiably be described as such.**

At the highest level, the *Sonic* games had a wide impact that both drove and reflected the changes the videogame market was undergoing in the Nineties. The original game intensified the rivalry between Sega and Nintendo, bringing the two companies to an even footing for the first time, as well as providing an early example of celebrity involvement in game development. The sequel signified the growing globalisation of the videogame market – the game was the result of collaboration between Japanese and American developers, and a full global launch was managed within a week. For *Sonic 3* and *Sonic & Knuckles*, the concept of an expansion pack was pioneered on consoles. However, first and foremost they were platform games featuring fantastic game design and amazing technical achievements.

One of the people who best understands the importance of *Sonic*'s 16-bit era is Takashi Iizuka, a Sonic Team veteran who now heads up development of the series. "While I was seeking employment at Sega, I bought *Sonic The Hedgehog* to understand the job and products of the company, and that was my first encounter with *Sonic*," he recalls. "At that time, I only had Super Nintendo, so I was impressed by the vivid screen and speedy gameplay of *Sonic*, and I remember thinking that I wanted to make a game like this if I got hired by Sega."

The simple fact that Iizuka only had a Super Nintendo highlights one of the key reasons that Sega needed *Sonic*. After being slow to jump into the 16-bit generation of consoles, Nintendo had arrived – and while Sega had a sales head start, Nintendo had a more powerful machine. Sega needed to differentiate itself from the competition, and to its credit it was already doing so. The Mega Drive was already catering to older audiences with complex RPGs and sports simulations. What's more, Sega was aggressively advertising against Nintendo.

To advance Sega's agenda of distinguishing its offering from the competition, *Sonic* needed to achieve three things. Firstly, the game and character had to fit into the plan to appeal to a slightly older demographic than the preteen audience associated with Nintendo's machines. Naoto Ohshima's initial designs of Sonic gave him sharp teeth, a human girlfriend and cast him as the vocalist of a rock band. While these harder-edged attributes would ultimately fall away, Sonic's attitude remained – he was impulsive, impatient and cool. "In the Nineties, Mickey Mouse, Pooh, all those animal-themed ▶




» We're glad a lot of these early concept bosses were dropped. Why on earth is Dr. Robotnik a bee?

# THE MOD SCENE

**The Sonic community has been producing interesting mods for the Mega Drive games for years – here are five of our favourites**



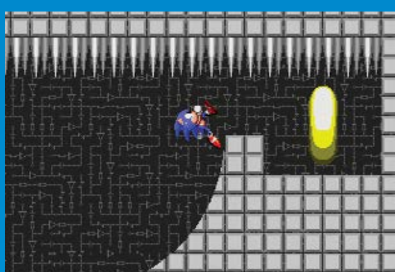

## SONIC THE HEDGEHOG MEGAMIX

■ This ambitious team project is a complete overhaul of the original *Sonic The Hedgehog* game, featuring new visuals, music, bosses and gameplay mechanics, as well as a range of additional characters. What's most impressive is that the entire thing has been ported to Mega-CD, allowing anyone with a blank CD-R to play it on actual Sega hardware.




## SONIC 1: THE NEXT LEVEL

■ If you want to see how far a Mega Drive can be pushed technically, take a good look at this short, but incredible, effort. The animation in *Sonic 1: The Next Level* is superb, the sampled music is amazingly clear, and some of the special visual effects call to mind Treasure's programming prowess – especially the climactic final boss fight.



## SONIC VR

■ Do you consider yourself an expert on everything *Sonic*? Beating this fiendish mod without cheating will prove it. This 'virtual reality training' game gives you a variety a short challenges which test your speed, problem-solving skills and mastery of *Sonic*'s physics. Highlights include challenges such as 'The Pain Train' and 'Roadkill Factory'.



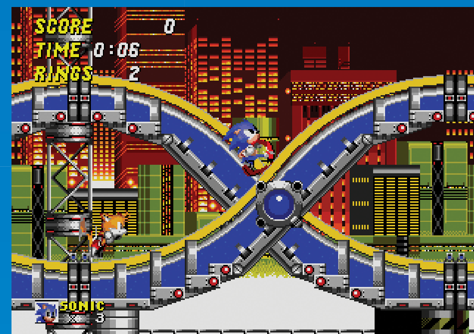
## SONIC CLASSIC HEROES

■ Remember the core mechanic of 2003's *Sonic Heroes*, where you controlled teams of three characters instead of individual characters? This impressive technical mod adds that function to the first two *Sonic The Hedgehog* games, allowing you to switch between Sonic, Tails and Knuckles on the fly in order to use their unique abilities, based around speed, flight and power respectively.



## BIG'S FISHING DERBY

■ This might just be the craziest mod that we have ever seen – not only does it do away with the blue blur (in favour of everyone's favourite big purple cat), it chucks the entire platform gameplay concept out of the window and replaces it with a fun arcade-style fishing game. When you've finished it, try *Big's Big Fishing Adventure 3* for more fun.




» [Mega Drive] *Sonic 2*'s Chemical Plant Zone provided a fine opportunity for Sonic to show off his extra speed.

▶ characters were all friendly and cute, and that was the matter of course," remarks Iizuka. "So seeing Sonic being speedy and edgy in that time, made me feel that he is a character whom has the exact same identity of the company Sega itself. Maybe everyone felt that way at the time too."

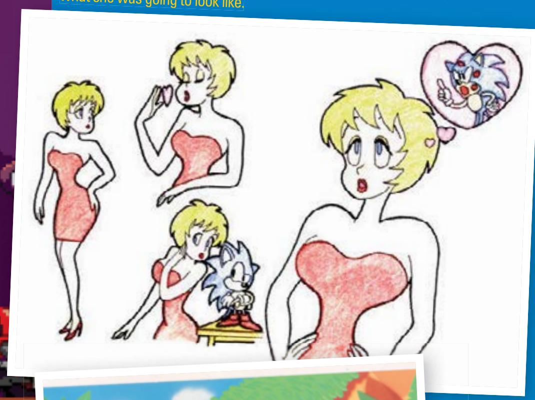
The second thing that Sega's new game needed to do was provide a strong demonstration of the Mega Drive's capabilities. The machine had been out for a couple of years, and was a known quantity, but there was no 'killer app' that new consumers could associate with the console. "I think the first *Sonic The Hedgehog*, which was born in Mega Drive, was the title that drastically expanded the possibility of the Mega Drive hardware," says Iizuka. "Although the spec of the Mega Drive hardware was lower than Super Nintendo, the graphics were as good as the Super Nintendo games." This was the joint work of the experienced graphic artist Rieko Kodama, whose previous work included *Phantasy Star* and the *Alex Kidd* games, and relative newcomer Jina Ishiwatari, who would go on to help define the look of the *Sonic* series. "It also achieved screen rotation, which was never done in the previous Mega Drive games," Iizuka continues. This was the responsibility of programmer Yuji Naka, who had cut his teeth on high profile arcade conversions for the Master System. As well as this technical feat, he was responsible for *Sonic*'s advanced physics and the efficiency that allowed Hirokazu Yasuhara's stage designs to be brought to life.




» [Mega Drive] Sonic's speed was more of a reward than a requirement – the original game often slowed things down.




» Once upon a time Sonic was going to have a girlfriend and this is what she was going to look like.





» We're big fans of the original *Sonic The Hedgehog* art. It still manages to look fantastic.

> **"I think Sonic was a title which contributed on improving the quality of future Mega Drive-released titles"**
> Takashi Iizuka

For the audio, an oft-noted weak point of the Mega Drive hardware, Sega did something incredibly bold and sought celebrity involvement. While Dreams Come True might not be a household name in the West, in Japan the pop band was making huge waves – it had already produced a platinum debut album and was gaining momentum, hiring the bassist and composer for the band, Masato Nakamura was a coup for Sega. The company had licensed music before with games like *Michael Jackson's Moonwalker*, but this was a bigger deal – here was a legitimate star from the wider world of entertainment taking an active role in game creation.

I think *Sonic* was a title which contributed on improving the quality of future Mega Drive released titles," says Iizuka. We can't argue – it's hard to keep track of how many programmers have cited the game as a bar against which they measured their own work.

The last thing *Sonic* had to do, and arguably the most important, was crack the American market. Sega was already doing good business in Europe, and the Mega Drive was never going to usurp the SNES in Japan. North America was up for grabs – *Sonic* would be going head to head with *Super Mario World*, and Sega Of America seized the opportunity. A promo tour invited players to try both *Super Mario World* and *Sonic The Hedgehog*, and advertising aggressively compared the two. Tom Kalinske made the call to bundle the game with the console, a move which would boost Mega Drive sales considerably.

It was that success in North America that led to another unusual move – the creation of a truly international game development team. *Sonic The Hedgehog 2* was developed at Sega Technical Institute in the USA, with a variety of Japanese staffers making their way across the Pacific to collaborate with local talent. The arrangement was put together by Mark Cerny, who had previously spent time working at Sega in Japan.

*Sonic The Hedgehog 2* was a straight evolution of the original game's concepts. It had more stages, it was more varied and it was faster – but the latter wasn't always a sure thing. Sonic's speed was always something that needed to be used with caution, and in the early stages of the game the team considered making it even riskier by allowing Sonic to be stunned by running into walls at top speed. In the end, they went the other way. Sonic's running speed ▶

# RING COLLECTOR

Peter Robinson is the admin of the Sonic Collections Page on Facebook, and owns some incredible Sonic merchandise

**What was your first encounter with *Sonic*?**
I was eight or nine years old and I begged my mum and dad for a NES one Christmas, but my best friend was getting a Master System, so I got one as well with *Sonic 2*. That's where it all began.

**What was the first piece of *Sonic* merchandise you picked up?**
Very first was a plush that a friend gave me at school, which I still have. It was Fleetway's *Sonic The Comic* where I really got into the character of Sonic.

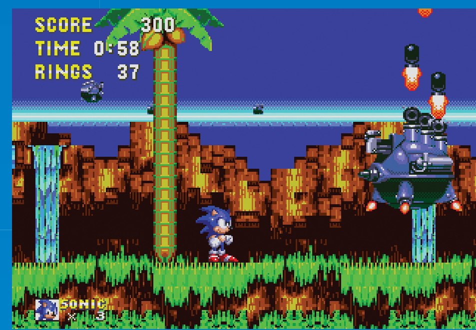
**What is it about *Sonic* in particular that drew you to collecting?**
I used to collect everything from Nintendo to Xbox and had so much that one day, I thought I'd just like to concentrate on one particular character. Sonic has always been my favourite videogame character, even when the games have dipped quality-wise. I guess it's because it's the first game I played, what I grew up playing and in the Nineties there wasn't much around that was cooler than the blue fella.

**How many *Sonic The Hedgehog* items do you currently own?**
I've never sat and tried to count it all, to be honest. I know Guinness World Records needs 3,000 individual items to consider an entry, I'm fairly sure I'm not far off that including everything – it's just getting the time and patience to go through it all!

**Are there any items or curios in your collection that you'd consider particularly unusual or noteworthy?**
I've got a few different prototype items, like the ReSaurus action figures and funky bobble heads which I've never seen before, then there's original artwork I own. The fruit machine [inset below] is always a favourite of people who see it too.

**Are there any items you're still after but haven't found yet?**
One thing I want, and I've always said once I had it I would be happy, is one of the six-foot statues like the one that was at Alton Towers. I've seen a few pop up on eBay but never managed to get one… yet!






» [Mega Drive] Not everyone was a fan of *Sonic 3*'s distinctive-looking art style. Personally, we quite liked it.

cap was listed, and Sonic gained a new move in the form of the Spin Dash – a variation on Sonic's trademark spin attack that could be launched from a standing start, providing instant momentum and a new way to attack enemies.

However, the biggest new addition was a little fox by the name of Miles Prower. "In *Sonic 2*, Tails was added as a player character, and along with the two-player versus mode, you were able to play in '1.5 player' gameplay, allowing two players to play at the same time in the normal mode, too," Iizuka notes, and it's an addition that he feels brought a lot to the series. "Titles which you can say, 'Want to play together?' when your friend comes to your place, will be played for a long time, so, personally, I think multiplayer is a meaningful feature. So not only in *Sonic 2*, but also in *Sonic Adventure 2*, *Sonic Heroes*, etc., we added multiplayer features several times in the *Sonic* series."

*Sonic The Hedgehog 2* was a tough game to develop, with revisions being made right up until the production deadline. However, it was a resounding critical success – in fact, many players still consider the game to be the finest entry in the series. Why does Iizuka think the game is held in such high esteem to this day? "Game design, level design, graphics – in all aspects, I think that *Sonic 2* exceeded the previous title and had a high perfection," he replies, "but for me, personally, the background music and special stage made *Sonic 2* stand out even more."

It wasn't just a superb game, but a superb piece of gaming business. In order to have the game out in time for Christmas 1992, the company needed to co-ordinate its international launch strategy. While it wasn't a simultaneous worldwide launch, it was as close as you'd get in those days. For the sake of comparison, the comparable blockbuster launch *Super Mario Bros. 3* took almost three years to complete its international release – *Sonic 2* took a matter of days. There was no time for hype to dissipate, and six million sales resulted.

# THE GANG'S ALL HERE

**Meet some of Sonic's weird and wonderful friends**

### ROUGE THE BAT

■ A treasure hunter and spy who stakes a claim on all the world gems , the only thing more obnoxious than Rouge herself is her painful hotter/colder Easter-egg hunt gameplay. Do yourself a favour and don't Google her without SafeSearch on.

### SHADOW THE HEDGEHOG

■ If you've ever wondered what Sonic would look like if drawn by a Linkin Park fan, wonder no more. Shadow is Sonic's edgy nemesis and even got his own game, in which he uses guns and glitches through stuff.

### CHARMY BEE

■ 'Why not Charmy *The* Bee?' we hear you cry. While we're not entirely sure what Sega's line of thinking was, we'd suggest it's because the little fool doesn't deserve it and anyone who has heard him witter on in *Sonic Heroes* will probably agree. Charmy is the worst. The *worst*.

### KNUCKLES THE ECHIDNA

■ Guardian of the Master Emerald and a friendly rival to Sonic, although Sega took even more liberties with echidna physiology than it did with Sonic – instead of waddling around eating ants as he should, Knuckles is a hard-punching badass

### MILES 'TAILS' PROWER

■ A plucky little fox with two tails, which can be spun at high speeds to allow limited flight. He's Sonic's best friend and a master mechanic, hence why he frequently turns up in mechs or planes. He can be a bit of a know-it-all, but he's a loyal sidekick to Sonic all the same.

### BIG THE CAT

■ The single greatest character ever created, this lumbering slab of brilliance makes up what he lacks in smarts with sheer determination. His best friend is a frog called Froggy, who frequently runs away – that's why *Sonic Adventure* sees him repeatedly going fishing to find his missing buddy.



### E-100 SERIES

■ There have been several playable Robots over the course of the series, but we didn't start playing *Sonic* games to mess around with machine guns and flamethrowers… but then again, *Shadow The Hedgehog* exists so all bets are off.

### ESPIO THE CHAMELEON

■ After a few years of designing anthropomorphic animals, Sega decided to pay attention to what the relevant creatures actually look like and how they behave. As a chameleon, Espio is able to disguise himself – he's a self-proclaimed ninja warrior and pretty cool.

### VECTOR THE CROCODILE

■ Vector is secretly one of the oldest *Sonic* characters, having originally been designed as the keyboard player in Sonic's band for an unused Sound Test feature in the first game. Still, he finally emerged in *Chaotix* before returning as the muscle on his team in *Sonic Heroes*.

### SONIC THE HEDGEHOG

■ The star of the show and Sega's enduring mascot. Factual accuracy was clearly of no concern when designing him – real hedgehogs have a top speed of around 12mph, are not blue and do not wear sneakers. Before his playable debut, he appeared as a mirror ornament in arcade driving game *Rad Racer*.

### AMY ROSE

■ Sometimes mistaken as Sonic's girlfriend, Amy is simply besotted with him and while the two are good friends, there's nothing more going on unless you delve into the plentiful fan fiction (for the love of God, never do that). She wields a massive hammer, which she's surprisingly handy with.

### CREAM THE RABBIT

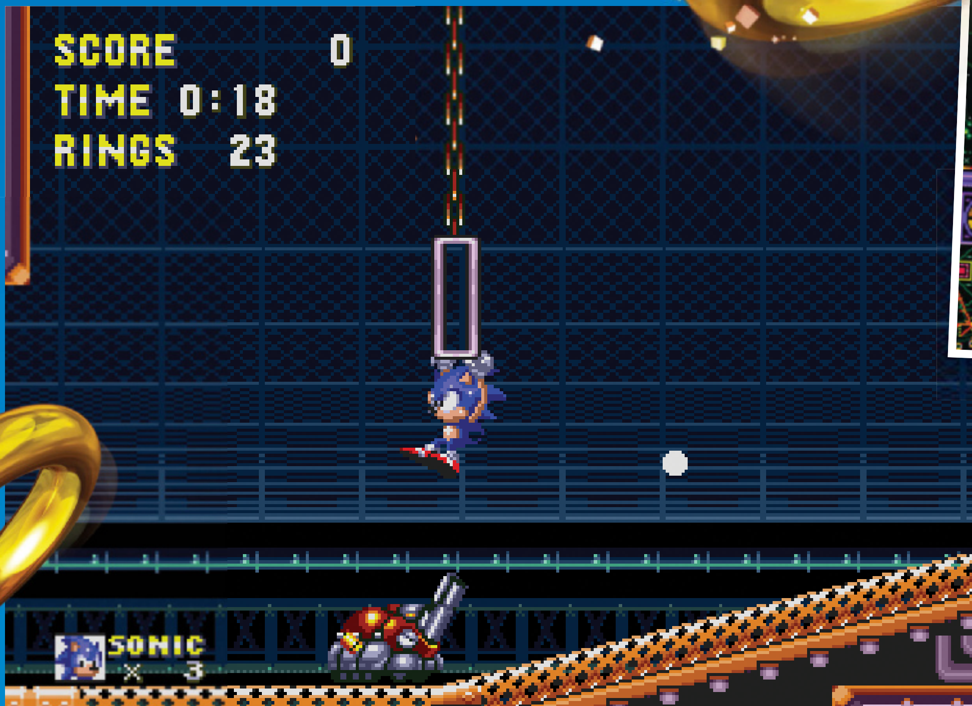
■ No, that isn't an instruction. Cream made her debut in the GBA spin-off series, her flappy ears working like Tails' tails in allowing brief flight. She's usually accompanied by the brilliantly named Cheese The Chao, a dapper little chap who is much more likeable than Cream herself.



» The official artwork for *Sonic Spinball*, which was released on the Mega Drive in 1993.

» This early *Sonic* concept art can be found in the rather-good *Sonic Gems Collection*.











» [Wii] We'd go as far as to say that *Sonic Colors* is one of the best of the recent *Sonic* games. If you're not played it you really are missing out.

The following game would prove to be the most ambitious of the lot – and it was the point at which Iizuka joined Sonic Team. For the young designer who was just coming off of *Golden Axe III*, it was a huge moment. "As noted previously, I did have a feeling that I wanted to make *Sonic* even before I joined Sega, so when I was told that I will be able to work on *Sonic 3*, I was very delighted," he remembers. "Before I went to the USA, my thoughts of *Sonic 3* were expanding, and after I officially joined the team, I was writing several notebooks filled with game design ideas."

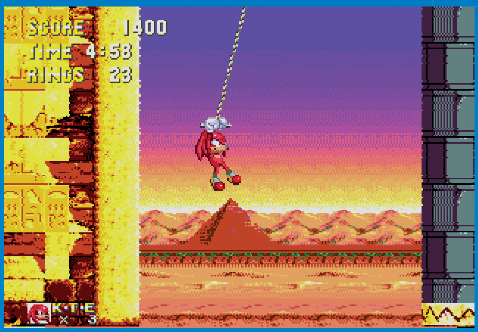
"At that time, the very new technology of 3D expression using polygons was investigated," Iizuka recalls. It's a surprising admission – the Mega Drive wasn't a machine that was particularly gifted with 3D capabilities, even with additional technology involved. "We weren't able to achieve the goal of having *Sonic 3* be '3 for 3D' but we did achieve 'three for three characters and three routes.'" Sonic and Tails were joined by Knuckles, a feisty echidna with the ability to glide and climb walls. "From the beginning of *Sonic 3*'s development, when Knuckles became a playable character, the idea to have his own particular route where only he can go in each stage was confirmed. So to create an ability that makes Knuckles go to places where Sonic and Tails can't go was wall climbing and gliding."

Additionally, players gained the ability to control Tails during flight, allowing for greater exploration of levels. The level designers were stretched thin to accommodate it all. "From a game design perspective, we needed much bigger levels compared to previous titles, and we were challenged to create the multiple routes which can be changed depend on the player character you are using," says Iizuka. What's more, Iizuka notes that the new features created some level design problems that were hard for the team to accommodate for. "It was very fun to create those Knuckles-only routes, but as his ability was too strong, he could climb to where he shouldn't go, and/or use the glide and ignore everything and get to the goal easily… so the debug was very tough."

From a character design perspective, Knuckles stands out as being even more aggressive and hard-edged than the already edgy Sonic, which was a deliberate choice. "He's actually not a villain, but was his first rival," Iizuka points out. "Tails in *Sonic 2* was on Sonic's side and was his little brother-like character, so in *Sonic 3* the idea of creating a rival came very quickly. But we didn't want to have just an enemy character, and we wanted to make him playable too, so we added the story of 'was tricked by Eggman,'" – or, for the retro purists, Robotnik. "Knuckles was not made to be a cute character unlike Tails, so we made him look strong and cooler by having dreadlocks. After more than 20 years he is also still one of the popular characters."

Of course, the eagle-eyed amongst you will have noted that Knuckles was in fact not playable in *Sonic 3* – he remains firmly in the antagonistic role from the second you meet him in Angel Island Zone to the moment you finally topple him in Launch Base Zone. However, that's got a lot to do with the scale

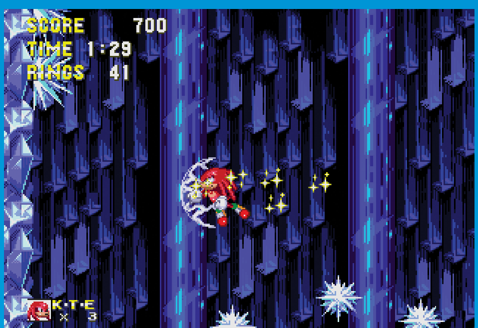
**"We needed much bigger levels compared to previous titles, and we were challenged to create the multiple routes"**
Takashi Iizuka




» [Mega Drive] By *Sonic & Knuckles*, abstract checkerboards were out and more realistic brickwork was in.

of the game. "*Sonic 3* was aimed to be more epic with larger level and various stages. But because of this, development took longer than expected, and we found out that the amount of the data may exceed the cartridges used at that time," Iizuka remembers. "Unfortunately, we decided to divide the game into two titles." You can see this in *Sonic 3* alone – the level-select screen lists levels that don't exist and Knuckles appears on the end post of every level but can't be played.

"We really wanted to make a complete version with first part and second part combined," Iizuka recalls. Of course, doing so would have been prohibitively expensive – a 32MB cartridge with save memory was enormously costly at the time. "Then Naka-san, who was the main programmer at that time, suggested docking the two cartridges. First we were very worried if that could really happen or not, but when the hardware development team achieved this idea, we were very happy." The second half of the game was thus released as *Sonic & Knuckles*, a cartridge with a cartridge slot on top. It could be used as a standalone game, or combined with *Sonic 3* to make the complete game. There were bonus features, too – owners of both *Sonic 3* and *Sonic & Knuckles* could play the Doomsday Zone, a final battle that was only accessible through the combined game, and Knuckles could be added to *Sonic 2* ▶




» [Mega Drive] Knuckles was always intended for *Sonic 3*, but finances and deadlines made this impossible, he was made playable in *Sonic & Knuckles*.

## SUMMER OF SONIC

**This year also sees the return of Sonic's own convention – we speak to its organisers to find out more**

**How and when did Summer Of Sonic originate?**

**Svend Joscelyne:** Summer Of Sonic originally started in 2006 as a one-off fan project I created to celebrate Sonic's 15th Anniversary. Back then, it was just a website, not a live convention – a collaboration between different fan sites that wrote interesting articles, interviewed Sega and Sonic Team celebrities, and held contests. We even had a virtual birthday card for Sonic that users could sign.

**What prompted you to turn it into an offline convention?**

**SJ:** It wasn't really our intention to pivot from an online website to a live convention; we just reused the name for the 2008 event because it was too good to use for a two-week project!

The idea for a live event came when a meeting of like-minded *Sonic* fans, who previously only knew each other online, got a bit out of hand. What started out as four guys turned into about 30 people dominating a pub, after word had spread. It made me realise that Sonic was actually bringing people together, years after we were all playing the games on our Mega Drive consoles.

With the help of Adam and Kevin Eva (the then-Sega community manager), we set out a plan in 2008 to hire a hall and decorate it so these 30 people could have their own space to hang out. Of course, word spread again and we ended up having to fit 300 people in a 200-capacity space! Good times.

**What sorts of things generally take place at Summer Of Sonic?**

**Adam Tuff:** A wonderful aspect of the *Sonic The Hedgehog* universe is the variety of media he has appeared in. The result is that Summer Of Sonic has become a celebration of a multitude of aspects – not just the videogames! The fanbase is extraordinarily talented, and so we encourage guests to show off their skills with art and cosplay contests. We have been extremely fortunate to be able to use Summer Of Sonic as a platform to show off new and upcoming titles – a feature that always attracts large crowds. We also have an incredible line up of Sonic celebrities from every corner of the franchise, including members of Sonic Team, composers, artists, and voice actors. We have even attracted big *Sonic The Hedgehog* names like Yuji Naka, one of the creators of Sonic, and the current head of Sonic Team, Takashi Iizuka.

**Do you get any support from Sega?**

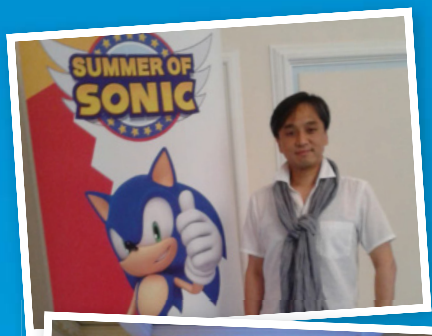
**AT:** Sega have been such an incredible source of support financially and logistically. We've worked with so many enthusiastic people from Europe, America and Japan, and every event always feels like such an immense team effort. We cannot thank all those involved enough!

**How has the event changed over the years?**

**SJ:** We've really come a long way since 2008. Back then, we just had a small hall, a stage and a Mega Drive hooked up to a projector. As the years went on, the venue has increased five-fold and Sega's support became stronger as we became a pseudo-official event. This fan project is often listed in press releases alongside official Sega America events, it's mad! The Sonic Team is especially appreciative of the event, which for us is incredibly humbling.

Just as important are the things that haven't changed. The Summer Of Sonic crew has largely been the same since 2008, so we now have the experience and camaraderie to put on a good show. It just feels like a group of best friends throwing a party.

We've also never taken our sights off of what makes Summer Of Sonic the exciting show it is. For us, it's all about fans meeting up in one place to make friends and have fun. Everything else is gravy, but as long as we focus on that core element, we always have a show that makes *Sonic* fans feel welcome.






# SPEEDING INTO THE FUTURE

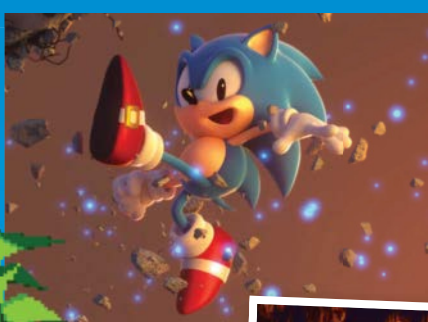
**As part of Sonic's 25th anniversary celebrations, two new games have been announced. Here's what to expect next year…**



## PROJECT SONIC 2017

PS4, XBOX ONE, NINTENDO NX, PC

■ The next 3D game in the series is set in "the darkest of times" and appears to have a more serious tone than recent *Sonic* games, with players invited to "join the resistance". What we've seen so far is the long-spined, green-eyed (modern) Sonic racing through a city that's being attacked by two enormous robots, which look like *Sonic Generations*' version of the Death Egg Zone boss. Classic Sonic, last seen in *Sonic Generations*, lends a little bit of a hand by smashing away some debris and then speeds off towards the laser-spewing baddies with his modern counterpart. *Project Sonic 2017* is being developed by the Sonic Team staff responsible for *Sonic Colours* and *Sonic Generations*, and it's scheduled for the holiday season of 2017.



» [PS4] There's little information about *Project Sonic 2017*, but we're glad classic Sonic appears in it.




## SONIC MANIA

PS4, XBOX ONE, PC

■ This new 2D game celebrates *Sonic*'s past with redesigned versions of classic levels from Sonic's 16-bit platform games, alongside brand-new levels, enemies, bosses and the 'Drop Dash' move that allows Sonic to rocket forward as soon as he hits the ground. Visually, it could pass for a lost 32X or Saturn game, with extra colour and smoother animation pushing *Sonic Mania* past what the Mega Drive could do, and the music is reminiscent of *Sonic CD*.

Green Hill Zone has received a makeover, with Batbrains lurking in an enormous new cavern section. A new boss has been added to the stage, which adds a twist to the old Robotnik wrecking ball template – the two tethered spheres can switch between being the attacker and the target, and swing from a central pivot. However, the big attraction of the first playable version is the brand new Hollywood-themed Studiopolis Zone. The level is filled with spring bumpers, launch pads and breakable windows, as well as broadcast trucks that can transmit Sonic through satellites. Better yet, it's also packed with references to classic Sega games – we've seen nods to *Streets Of Rage*, *Daytona USA* and even an old *Sonic* popcorn machine.

*Sonic Mania* is being developed by Sega in collaboration with PagodaWest Games, Christian Whitehead and Headcannon Games, and will arrive in spring 2017.





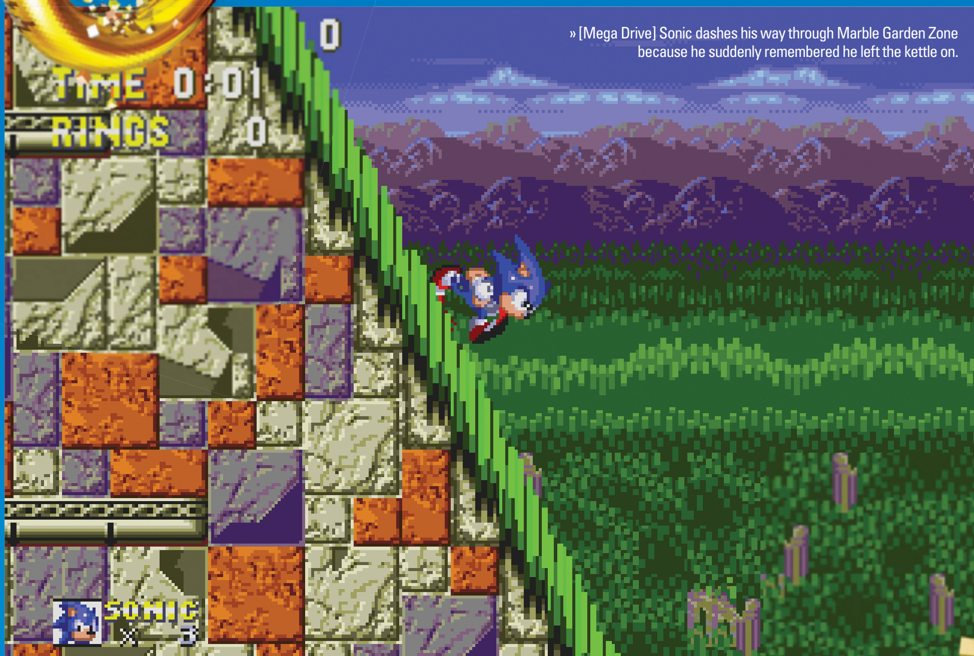

» [Xbox 360] *Sonic The Hedgehog 4* was an episodic release across two separate downloads. *This is Episode 2.*

▶ if you also owned that game. Expansion packs had been commonplace in computer gaming, but not on consoles, and the execution was widely accepted as a good thing. Of course, the team can rest happy too – many fans consider both games part of a whole, rather than two games with a gimmick.

Of course, those things weren't all that *Sonic 3* and *Sonic & Knuckles* brought to the table – new elemental shields gave additional abilities to Sonic, including a double-jump, an air-dash and a bounce attack. Hiding gigantic rings throughout each level for special stage access encouraged players to explore a bit as well as perfecting their fastest routes. Oh, and a new, less abstract art style pointed towards Sonic's future direction, in which he'd visit realistic cities and interact with humans.

The change of direction in the 3D era has often been a point of contention amongst long-term fans of the series, but in recent years Sonic Team has been using the Mega Drive games as reference material with increasing frequency. Side-viewed gameplay has been employed commonly since *Sonic Unleashed*, *Sonic Generations* gave us glorious updates of classic stages, and *Sonic Lost World* featured an abstract art style that hadn't been seen since the very first games in the series. "3D games are dynamic and the visuals are grand too, but personally I like the 2D game from the Mega Drive era, too, as it is easy to play," says Iizuka when asked about this trend. "We brought up various ideas in the past but with limited hardware spec, so we do have ideas that we weren't able to apply at that time. Even now when I think about creating a new game, I always try to think applying the good part of 3D and good part of 2D to be applied in that new game."

Of course, the influence of Sonic's earlier outings goes much further than that too. Every E3 conference dig can be traced back to the console war that truly fired up when Sonic and Mario were put side by side.




» [Mega Drive] Sonic dashes his way through Marble Garden Zone because he suddenly remembered he left the kettle on.

Every time console games have pushed to obtain an older target age group, that's something that *Sonic* was on the leading edge of – and broadening demographics has been important to the growth of the games industry, whether for reasons of content (such as *Grand Theft Auto*, a game that couldn't be sold to the under-18 audience in good conscience) or appeal (games like *Dr. Kawashima's Brain Training*). Five years prior to the co-ordinated international launch of *Sonic 2*, your gaming experience depended heavily on where you lived – you might be playing a NES, a ZX Spectrum, an MSX or something else entirely depending on region. These days, with same-day global launches and region-free consoles, that seems like a lifetime ago. And of course, every time you buy DLC, you might want to spare a thought for *Sonic & Knuckles*. And, of course, all of that is to say nothing of the legion of mascot platform games that came in the wake of the *Sonic* series.

Likewise, the games have brought a generation of creators into the fold. The kids who grew up idolising Sonic The Hedgehog are now the kids making games like *Freedom Planet*, and in some cases even working closely with Sega – people like Christian Whitehead and Simon Thomley were raised in the fan scene and have taken a key role in continuing the legacy of those early Mega Drive games, both through direct conversions and with projects like *Sonic Mania*, a love letter to the 16-bit heritage of the *Sonic* series. Whatever Sonic is up to in the present day, the historical significance of that quartet of Mega Drive games is assured.



» [PS3] *Sonic & All-Stars Racing Transformed* is easily the best spin-off from the *Sonic* franchise.

But for all of our assessment of Sonic's legacy, it's Iizuka as the guardian of that legacy who truly matters. "I do not want say anything too exaggerated, but I think the *Sonic* games were one of the titles that energised the videogame industry of the Nineties," he says "Especially in the West, by having *Sonic* in the market, the hardware competition of Nintendo versus Sega was very clear, and that lead to the result of having more hardware in the market and many third parties joining to create games on Mega Drive and/or SNES. Of course, this wasn't just because of *Sonic*, but to Mega Drive, I think *Sonic* was a great trigger," concludes the developer. A trigger is a fine way to think of it – the Mega Drive was always potent, but *Sonic* propelled it like a speeding bullet into the realm of the all-time great consoles. 25 years later, the impact of that shot is still being felt. ★



# MARCH OF THE MASCOTS

**After the first discovery of a hedgehog nesting in a console in the early Nineties, the world discovered a full-on animal infestation of the gaming market. Nick Thorpe looks back at the critter chaos of the 'mascot platformer' boom…**

**For a long time, platform game characters were predominantly humans.** They could be everyday working men, like Mario and Miner Willy; cavemen, like Bonk and Chuck Rock; warriors, like Sir Arthur or Rastan; they can even be slightly magical or mythological types, like Alex Kidd or Pit. There were exceptions – you had the likes of Scrooge McDuck, Dizzy was, of course, an egg, and Psycho Fox was quite a few different animals, depending on what sort of mood he was in. But predominantly, platform game heroes were human.

It was a trend that made sense – the likes of *Pitfall*, *Mario*, *Lode Runner* and more had all featured human characters, so those were the success stories that developers sought to emulate. However, the industry shifted in the early Nineties as a new platform game success story emerged. *Sonic The Hedgehog* was a hit when it launched in 1991, selling millions of copies and boosting the popularity of the Mega Drive. Success breeds imitators, and just as *Street Fighter II* had kicked off a wave of fighting games in the arcades earlier in the year, *Sonic*'s success would pave the way for the home market to become flooded with platform games starring an assortment of animal mascots.

Why did so many people ape Sega's hit? For coders, *Sonic*'s technical achievements became a benchmark against which their own new games could be measured. "*Sonic The Hedgehog* was incredible for its time, and was a real kick in the pants to step up my game," says David Perry, who spent the 16-bit years at Virgin Interactive and Shiny Entertainment, and coded platformers including *Cool Spot*, *Aladdin* and *Earthworm Jim*. "It's funny how programmers work, they think everything is fine until they see someone kicking butt, then they think, 'I know how to do that,' and they in turn step up their game." George Allen, who was working for Gremlin Graphics at the time, had a similar experience. "I can't remember when I first played *Sonic*, but I know it was at Gremlin and a bunch of us were blown away by it. I have a feeling it was during *Zool*'s early development as I don't remember us setting out with *Sonic* as an objective.










» [Mega Drive] Bubsy made his debut on the SNES and Mega Drive. He proved fairly popular, starring in several sequels.

Everything in *Zool*, like the scroller and the slopes, were present in my earlier games."

But the key consideration was always going to be commercial appeal, and marketers were quick to latch onto that. Just as *Sonic* had targeted *Mario* in advertising, the new breed were taking aim at Sonic. "Bad News For Hedgehogs," was the headline for the *Zool* advert, and the Amiga press took it to heart. "I guess it was natural after Mario and Sonic that most companies would want their own mascot IP," says George, although he's quick to point out that it wasn't new territory for his employer. "Gremlin has always had them, like Monty Mole, so it wasn't new. The Amiga did seem to have a lot of them at one point." Indeed, many publishers recognised that there was a gap in the market for such a character on that format – and the press was always keen to tout the latest game as "better than *Sonic*" or a "*Mario*-beater".

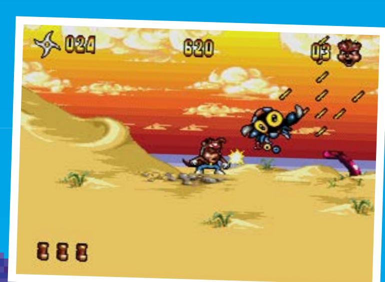
It might seem like we're overstating the degree to which the computer press compared its offerings to the console platformers, until you actually go back and read what the magazines of the time were saying. In his review of *Harlequin* for *Amiga Power*, Stuart Campbell claimed that the game was "up there with *First Samurai*, but perhaps more importantly, right up there with (and beyond) *Sonic The Hedgehog*". According to *Amiga Format*'s Marcus Dyson, *Zool* was "the game that makes *Sonic* and *Mario* look like the sad creations of teams of deluded child ▶




» [Mega Drive] Even *Ristar*'s unique stretchy arms weren't enough to save him from the critics' platform fatigue.



» [Amiga] Superfrog even borrowed Sonic's 'wheel-legs' animation, rather cheekily.




» [Mega Drive] *Zero The Kamikaze Squirrel* is a rarity – a spinoff of a mascot platformer!



# MAKING THE ULTIMATE MASCOT

**We think we've narrowed down the formula behind every Nineties platforming mascot – and we've put together a hero of our own…**

## SPECIES

First off, pick an animal and design your mascot around that. It doesn't matter if it doesn't look like what you say it is – Knuckles is the least realistic echidna of all time, after all. We've chosen a koala, for a critical blend of cute and exotic.

## EDGE

Zool is a ninja. Bubsy never shuts up. Radical Rex has a skateboard. The point is that your mascot needs to have some kind of edgy attribute or attitude to set it apart from the crowd. Our guy is a master of the Japanese martial art of karate.

## ABILITY

You'll need a gameplay gimmick to ensure that your game doesn't fall into the trap of generic bum-bouncing. Gex could stick to walls and Sparkster had his jetpack. Our mascot will have the ability to climb background trees and catapult himself around using their branches.

## COLLECTABLE

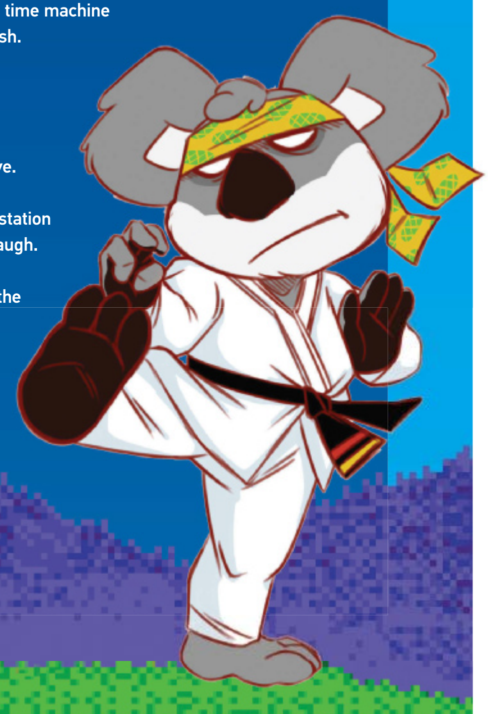
Whether they're realistic like Donkey Kong's bananas or abstract like Sonic's rings, your mascot needs things to pick up as they traverse each level. For our character, we've gone for eucalyptus leaves, because that's what koalas eat. Get 100 and receive an extra life!

## NAME

This needs to summarise your character – a good one like Sonic The Hedgehog conveys that he's fast and a hedgehog. Extra points are given for alliteration or rhyming. We've gone for Kenji The Karate Koala. Now we just need a time machine and we'll make a pile of cash.

## NEMESIS

Every great hero needs an iconic villain who stands against everything they love. For Kenji, that's Dynamite Dingo – a demon of deforestation who blows up trees for a laugh. Are they destined to fight forever? That depends on the commercial success of the initial game…



» Thanks to our friend, Tuesday, for making this awesome concept art of Kenji. Check out her work at: doodle-dumpingground.tumblr.com.





» [Mega Drive] Our dinosaur chum, Radical Rex, is mostly radical because of his skateboard. Dynamic, man.

» [Mega Drive] Mr. Nutz looked cute in his game – his 'attitude' was reserved for the box art.



psychologists that they are." Some time later, *Commodore Force* ran a news story on the release of *Sonic CD*, solely to point out that a colleague had already completed it, and that *Mayhem In Monsterland* "has been in the office for a few days now, and we're still barely managing to reach Pipeland."

In his review of *Superfrog* for *Amiga Computing*, Jonathan Maddock asked the question, "How do you make a platformer that isn't instantly compared to *Mario* or *Sonic The Hedgehog* or *Zool*?" and came to the conclusion that it was impossible. He might well have been right, because the consoles weren't exempt from the trend for fuzzy mascots either. The market for cartoonish platform games was so strong that no single developer could fulfil the demand alone, and publishers were keen to put them on the market as quickly as they could. Whenever an opportunity arose, like *Sonic 3* missing the Christmas 1993 shopping season, a whole host of other publishers would compete for the sales that the big players missed.



» [3DO] *Gex* wasn't a success at first, but achieved massive sales with sequels before bowing out.

The result was a slew of new mascots that followed a particular formula, each offering a gimmick to stand out from the crowd. Bubsy The Bobcat landed on the SNES and Mega Drive, and was marketed for his talkative nature – the cartridges contained an awful lot of speech samples. Awesome Possum was eco-friendly, Rocky Rodent had his ever-changing haircut, and Sparkster was rocket-powered. Some developers were able to leverage licensed properties, which allowed them to sidestep accusations of copycat character design and tap into existing fan followings. In particular, Warner Bros. and Disney licences proved popular – the likes of *Tiny Toon Adventures*, *Animaniacs* and *Taz-Mania* all did well, as did Sega and Capcom's games starring Mickey Mouse. David Perry's work at Virgin is another key example – *Cool Spot*, *The Jungle Book* and *Aladdin* were all licensed and thrived in the competitive market.

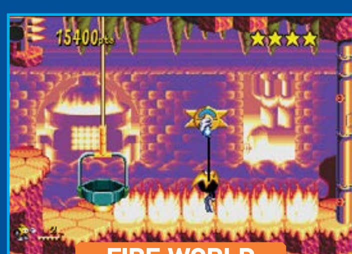
By the mid-Nineties, though, the formula had started to become stale. Critics were bored with jumping on the heads of enemies to defeat them, tiring of cartoon animals, and regarding any new "*Sonic*-beater" with suspicion. Developers were reaching the limitations of the 16-bit consoles, meaning that any new platformer had to be excellently designed as a bare minimum, and even then it wasn't always enough to ensure success. Good games were met with polite applause rather than the rapturous reception that they would have previously enjoyed – for example, Steve Merrett's 84% review of *Ristar* in *Mean Machines Sega* stated that "a year or so ago, *Ristar* would be wearing a Megagame logo with pride," but concluded that against the competition, "obscurity beckons".

After a brief period in which conforming to the *Sonic* model was enough to ensure success, suddenly

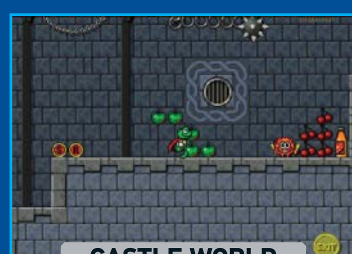
## HABITATS FOR HEROES



• FOREST WORLD •



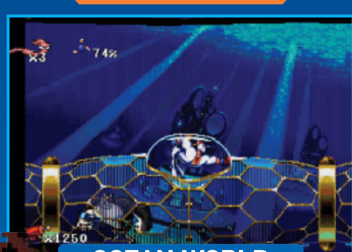
• FIRE WORLD •



• CASTLE WORLD •



• DESERT WORLD •



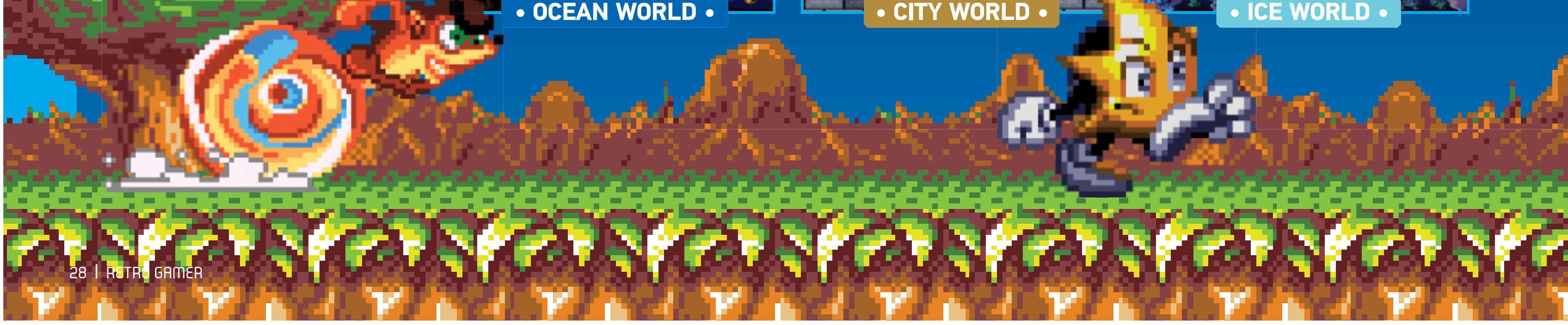
• OCEAN WORLD •



• CITY WORLD •



• ICE WORLD •



developers had to do something different in order to make any headway. On the SNES, Rare delivered by reviving Mario's old antagonist in *Donkey Kong Country*, and coupled some excellent game design with astonishing prerendered visuals. The game received stunning scores and shifted 9 million copies. Another late hit from the 16-bit generation was Shiny Entertainment's *Earthworm Jim*. Jim was an anti-Sonic in many respects. Worms are neither furry nor cute, and the character's abilities came from subverting the uselessness of real-world worms with a power suit. It also didn't hurt that, like David Perry's previous platform characters, Jim preferred a more active form of combat and didn't jump on the heads of enemies.

It also helped that David Perry had already seen the need to diversify. "Shiny liked to make game development unpredictable," he recalls, before pointing out the diversity of the developer's back catalogue. "A game about an earthworm, a game to experiment with a head-mounted sniper weapon, a game starring a flying baby, an open world RPG, an action platformer based on torture. It was *impossible* to predict the next game, so we didn't lean in on a single mascot."

Both of the hits above did well enough to receive sequels on the Mega Drive and SNES, providing some great games for those still clinging to their machines. But as the world moved on to the 32-bit machines, there seemed to be an opportunity to revitalise the genre. No longer constrained by hardware, developers could reinvent the platform genre. Unfortunately for many of the developers involved, that task proved troublesome.

Mascots that had found their feet on 16-bit consoles often faltered when they arrived on the new machines – they had the choice between sticking with their established formula in new 2D games, which had fallen out of fashion, or making the difficult transition to 3D. This move claimed quite a few victims. Sega Technical Institute's 3D game *Sonic Xtreme* fell prey to development difficulties and was cancelled. *Bubsy 3D* made it to release, but it might as well not have done as it was one of the very worst games of its generation. *Earthworm Jim 3D* struggled through development and came out in a rather underwhelming state. Part of the problem was that 2D platformers were a well-established design template, but there was no model to emulate with 3D platformer design.

The result was that generation belonged to a new crop of mascots. One of the first was Rayman, Michel Ancel's limbless hero who bucked the trend of a generation by selling millions of copies of his



» [Mega Drive] Spring platforms are a huge part of any 2D platform game's design.

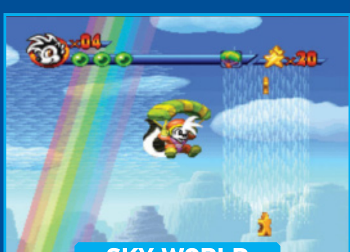


» [GameCube] Ty might have beat up his rival mascots in adverts, but he never achieved their status.

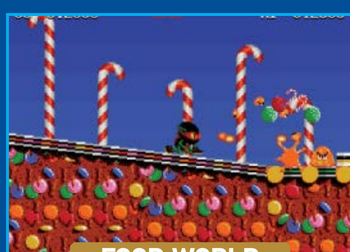


» [N64] By the time of *Banjo-Kazooie*, mascot platformers had evolved significantly.

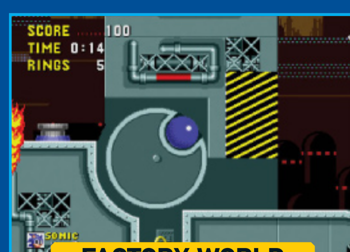
**For some reason, platform game mascots love to hang out in similar environments to one another – just think how many times you've seen the following locales…**



• SKY WORLD •



• FOOD WORLD •



• FACTORY WORLD •



• SPACE WORLD •



• CAVE WORLD •



• MUSIC WORLD •



• THEME PARK WORLD •

family-friendly 2D debut. However, he'd moved on to a well-received 3D sequel before the end of the 32-bit generation. Gex didn't have a strong start thanks to his association with the 3DO platform, and the gecko's debut 2D game wasn't a massive hit. However, his 3D sequels that followed in the wake of *Super Mario 64* were surprisingly popular and sold millions of copies.

However, the biggest success was reserved for mascots who started off in 3D games. Naughty Dog's *Crash Bandicoot* didn't offer true freedom of movement, thanks to its corridor-style levels, but that hardly hurt the game – it received strong reviews and sold millions of copies, and spawned two excellent sequels. On the Nintendo 64, *Banjo-Kazooie*'s titular double act garnered critical acclaim and commercial success, much like almost everything else Rare did on the platform. Even lesser-known heroes such as Croc, whose games were a step behind those of the competition, did well because there was a strong demand for 3D platform games – the original was Argonaut's bestselling game and the sequel didn't do badly either. Oh, and then there's Spyro The Dragon, who was the face of a successful trilogy of 3D platform games for Sony's PlayStation.

But despite the success of some mascots during the 32-bit era, changes in the market meant that such characters weren't as important as they once had been. The bestselling games of the 16-bit years had been the likes of *Super Mario World*, *Sonic The Hedgehog*, *Donkey Kong Country* and *Aladdin*. In the generation that followed, the likes of *Tomb Raider*, *Metal Gear Solid* and *GoldenEye 007* ruled the roost. Even if the market hadn't been burnt out by the bandwagon-jumpers during the early Nineties, demographics were changing – the average age of gamers was increasing, and sales began to favour more adult-oriented games featuring human characters, gunplay and more realistic situations. The quality bar for a mascot platform game was still very high as a result, and you can see this in the failure of games like *Jersey Devil*, *Bug* and *Punky Skunk*.

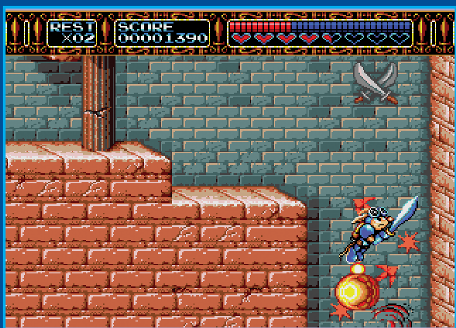


» [PlayStation] Croc is a fine example of an anthropomorphic mascot. In fact, he's better than Sonic and deserves his own shiny cover. [Ed: Sam, are you writing captions again!?]



## HALL OF **FAME**

**Here are the mascot platformers that deserve to be remembered**




### ROCKET KNIGHT ADVENTURES
KONAMI, 1993

■ Sparkster is cute (for a knight, anyway), he doesn't jump on enemies' heads, and the rocket booster on his back gives him a really distinctive gameplay hook. Thumbs up for this fantastic character by Konami.



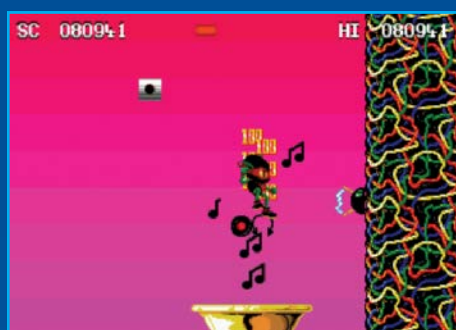

### EARTHWORM JIM
SHINY ENTERTANMENT, 1994

■ The oddity of the bunch blends a great sense of humour with an unconventional character design, plus David Perry's refined platform game engine. Jim (designed by Doug TenNapel) proved so popular, in fact, that he had his very own TV series. Groovy!



### CRASH BANDICOOT
NAUGHTY DOG, 1996

■ Sure, he didn't roam around 'proper' 3D environments, but the marsupial's platform outings were varied and packed with things to collect. Crash will be returning to modern consoles this year in *Skylanders*. There is a remaster on the way, too.




### ZOOL
GREMLIN, 1992

■ While he's a bit slippery and skittish, Zool was one of the first characters to get all up in Sonic's face properly – adverts showed the Gremlin mascot literally muscling the blue hedgehog out of the way.

### BANJO-KAZOOIE
RARE, 1998

■ What's better than one mascot with attitude? Well, two excellently-designed heroes with distinct personalities in an absolute belter of a game, designed by a world-famous studio that's what.









» [Amiga CD32] Brian The Lion dispatches an enemy using the time-honoured foot stomp attack.

The next generation made the end of the mascot trend clear. Do you remember Ty The Tasmanian Tiger? His advert featured a hospital, showing off an array of familiar bandaged patients – a dragon, a hedgehog and a bandicoot – to showcase his toughness, but he's been consigned to the dustbin of history. Sonic designer Naoto Ohshima returned with an underwhelming cat character in *Blinx: The Time Sweeper*, and the less said about the likes of Vexx or Scaler, the better. You can count the iconic mascots of this era on one hand – Ratchet and Clank and Jak and Daxter were big deals, and Sly Cooper has managed to endure too.

As with any trend, it's the most successful that have survived the test of time. Sonic still generates buzz, and news of Crash Bandicoot's return has been well received. Likewise, *Donkey Kong Country Returns* did big business on the Wii. The likes of Earthworm Jim and Sparkster made their returns on console download services, and Spyro has metamorphosed into the toys-to-life juggernaut *Skylanders*. Even *Ratchet & Clank* received a PS4 remake. However, the lower-tier mascots have fallen by the wayside.

"The industry goes through waves… males, females, creatures etc.. It's the natural way of things," reflects David. "I think the secret is humour because it's the most difficult to do. I don't care what the entity is, if it's funny, gamers will enjoy it." As for George, how does he remember the mascot wars? "*Sonic* was on everyone's mind went it came to *Zool*'s release, and looking at YouTube there's a blue hedgehog that gets kicked off screen at the end," he notes. "But yeah, it was mostly just a marketing thing."

But it was a *big* marketing thing, and there's still a group of players hungry for more. Don't take our word for it – just take a look at the public support for games like *Yooka-Laylee*, a spritual successor to *Banjo-Kazooie* which raised over £2 million on Kickstarter. The march of the mascots might have ended in earnest many years ago, but we will never truly see the last of our anthropomorphic friends with attitude. ✱

## HALL OF **SHAME**

**If you ever see these roaming the streets, relocate them to a bin**



### BUBSY 3D

EIDETIC, 1996

■ The early *Bubsy* games weren't awesome, but at least they were playable. This was a nadir for gaming as a whole – *Bubsy 3D* is visually atrocious, gives you a headache and appears to be unfinished.



### AWESOME POSSUM KICKS DR MACHINO'S BUTT

TENGEN, 1993

■ Sure, the environmentalist angle is all very good and a message worth conveying, but that doesn't redeem a game which pollutes your cartridge slot.



### SOCKET

VIC TOKAI, 1993

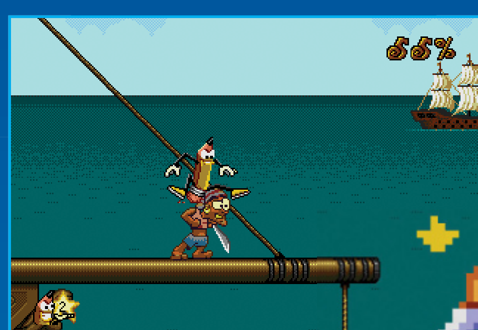
■ This is one of the more shameless *Sonic* rip-offs out there, just without the fun or refined gameplay. To be fair, we wouldn't expect much more from a character that's a cross between a duck and a plug socket.



### PUNKY SKUNK

UKIYOTEI, 1996

■ He's not particularly inclined to listen to the *Sex Pistols*, and his game was already a tired relic upon its 1996 release. Like his other stablemates in this list, this skunk with attitude absolutely stinks.



### WILD WOODY

SEGA, 1995

■ Rule one of animal mascots: make them animals. Honestly, who on Earth thought that a *pencil* with attitude was a good idea? We wager that Wild Woody's designer stared at his drawing apparatus for too long and phoned this one in.

# SLAP FIGHT

## Toaplan's early shooter might not have been the most original game of all time, but that didn't mean it wasn't worth playing. Darran Jones has an itchy trigger finger...

**If you were a gamer in the Seventies and Eighties, the arcade was your temple.** While the home computer markets were booming, gamers religiously flocked to local arcades because the games found there offered state-of-the-art aesthetics that didn't exist anywhere else. Granted, gameplay innovations were being made in the home and across a wide variety of genres, too, but it was mainly in the arcades where most of the advancements for racing, fighting and shoot-'em-up titles were being made.

Not every game became a success by creating something completely new, though. Indeed, some titles simply built on the mechanics of existing games and added their own unique ideas to them. *Slap Fight* easily falls into this category, and while it leans heavily on a number of prominent arcade shooters, it's still very much its own game, and a bloody good one at that.



» [Arcade] A fully-tooled SW475 Starfighter has formidable firepower, but is an easy target.

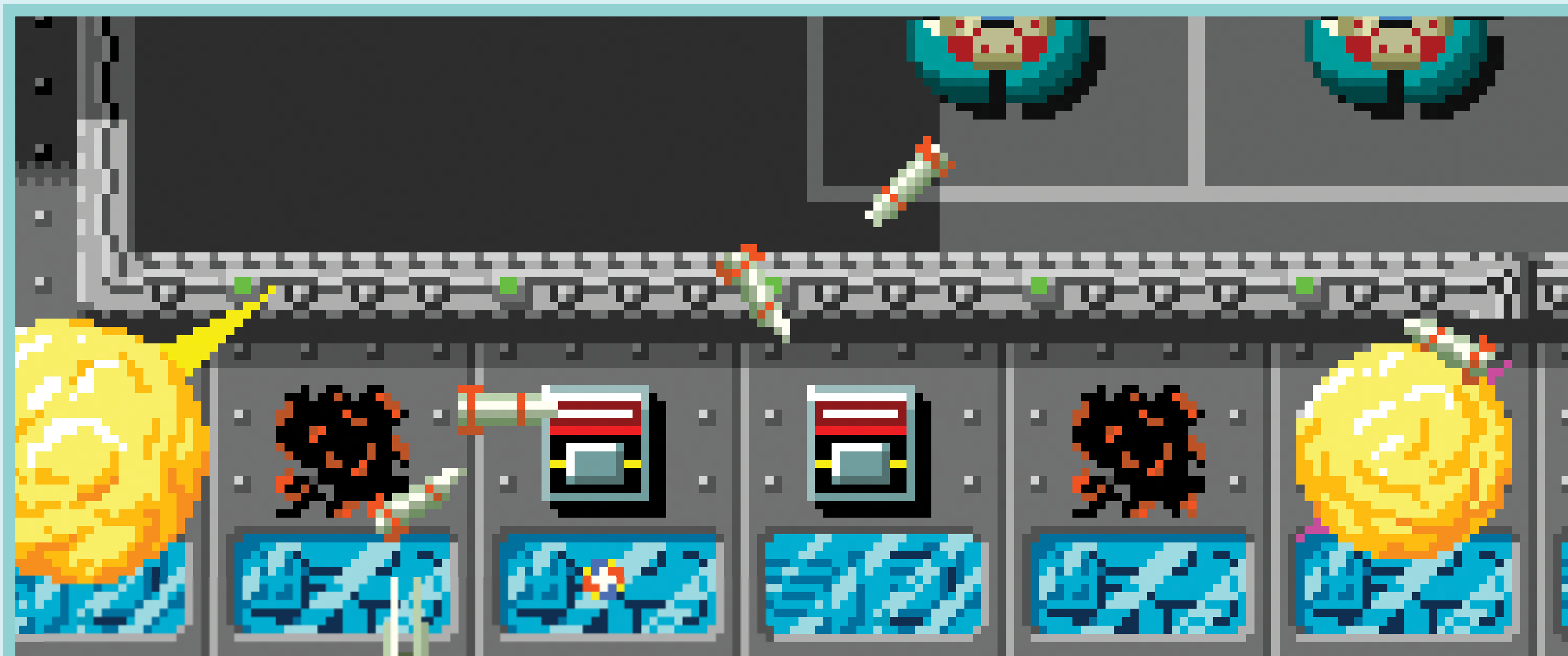
*Slap Fight* was first released in 1986 by legendary shoot-'em-up developer, Toaplan. The company was no stranger to the genre, having already dabbled with the likes of *Performan* and the excellent *Tiger Heli*, but *Slap Fight* saw the developer come of age. *Slap Fight* was clearly influenced by Namco's *Xevious*, a fact that was made obvious by its vertical-scrolling setup and similar-looking visuals, but Namco's shooter wasn't its only influence. Toaplan's shooter was also indebted to Konami's *Gradius*. In fact, it's one of the few games that we can think of that apes *Gradius*' clever systems, proving that, outside of Konami's own franchise, the mechanic wasn't as influential as many think.

Shooting certain enemies in *Slap Fight* produced stars, which, when collected, would highlight different menus on an eight-tier power-up bar. Selecting Speed would increase the manoeuvrability of your ship and could be upgraded five times (although it's worth noting that you'll need the reflexes of a Jedi to successful manage your SW475 Starfighter on the highest settings). Side-Shot allowed you to take out enemies on your flanks, which became very useful at certain points of the game, while Shot was your default weapon that was fast to fire but had limited range. *Slap Fight*'s best power-ups were the add-ons that bolted onto

# PIXEL PERFECT

**PREP YOUR BLASTERS, YOU'VE GOT SOME SHOOTING TO DO**

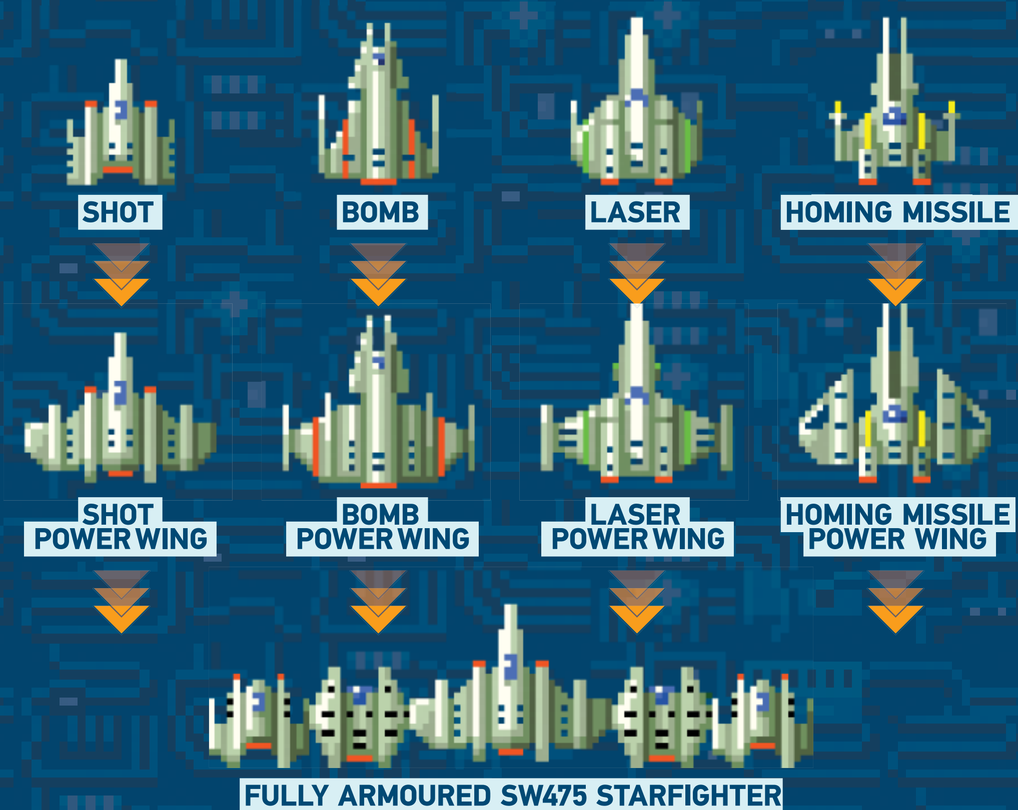




> "Looking back, I wished we had used more colour but it didn't fit well with the slow smooth movement"
>
> Nick Bruty

## BUILDING A BETTER STARFIGHTER

Slap Fight's power-ups explained



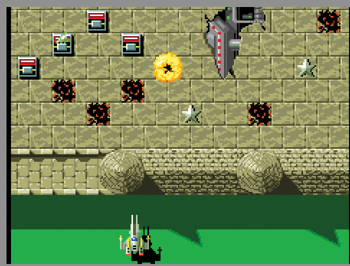
## SURVIVING SLAP FIGHT

Use these tips to defeat the alien forces



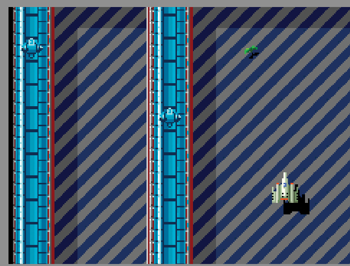
### SNEAKY POWER-UP

■ The arcade game has a neat secret in it that will greatly boost your survival chances. Simply get as far as possible without firing. Upon dying, you'll be giving a full complement of weapons.



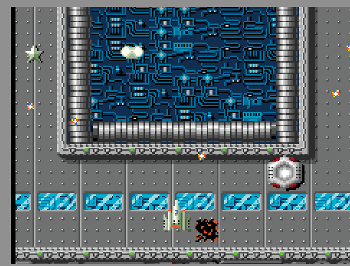
### BRUCIE BONUS

■ Upgrade to Bomb or Homing Missile and targets appear that can be hit for extra points. The landscape can be destroyed, too. These weapons are better in some areas than others.



### LET THEM GROW

■ In addition to being powerful, the Laser has another useful effect. Use it on the plants found throughout the game and they'll grow, earning you lots of lovely bonus points in the process.



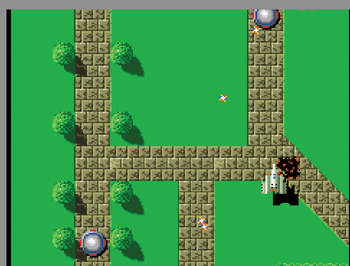
### ROLLING START

■ If you died before you could select a new power-up you'll start with the Speed icon highlighted. Select it, as the boost will instantly improve your chance of picking up more stars.



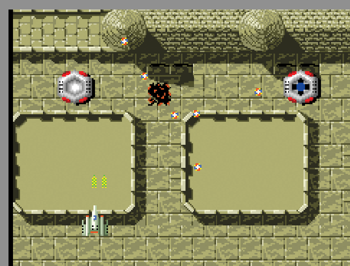
### STAR POWER

■ And while we're on the subject of stars think about which power-ups you want to grab first. Typically, we go Speed, Wing, Homing Missile, but that's a lot of fighting behind enemy lines.



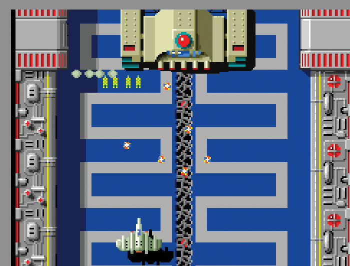
### BEWARE SNEAK ATTACKS

■ You always need to watch your back in *Slap Fight*. Enemies will constantly appear from behind you and they are very accurate. They also fire at close range, so be on high alert.



### DON'T GET GREEDY

■ The base weapon only fires half the distance of the screen, meaning you'll often need to move upwards to take out enemies. Just be aware that this also puts you closer to their bullets…



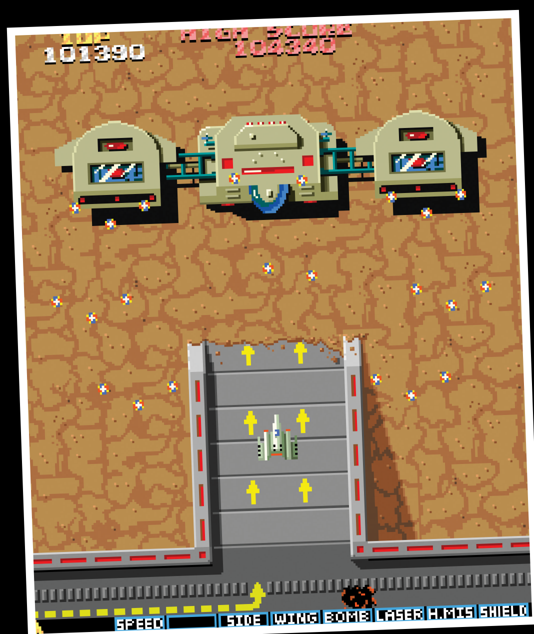
### WATCH THE PATTERNS

■ The patterns of bosses are tricky to read, but they are there. Take a deep breath, make sure you're suitably powered up and hammer that fire button for all it's worth.

your ship, physically changing both its appearance and size. Wing would typically improve the power or speed of an equipped weapon but made your ship a bigger target. It could be upgraded three times, saving your ship should one of the sets of wings take a stray hit (a direct hit will still kill you, though). Bomb was a slow attack that had a short range but delivered a devastating strike, while Laser was desirable due to its high firing-rate and tremendous range. Homing Missiles required seven stars to activate, but it delivered exceptional firing power due to being able to fire off up to 16 guided missiles at once, while Shield provided much-needed invulnerability for either three hits or 25 seconds, whichever happened first.

While upgradeable weapons had featured in *Gradius*, *Slap Fight*'s handling of them was quite different. Unlike the Vic Viper, which stayed constant regardless of what new weapons it sported, the SW475 Starfighter would change in both size and shape as more power-ups were bolted onto it. This created an interesting risk vs. reward mechanic as while the addition of new power-ups ensured you could deal out an insane amount of destruction, it also made you a far easier target. Adding power-ups, like Wing, would make short work of your opponents but it also meant that only skilled players could keep the upgraded ship in play for a decent length of time. It's a neat system, although it shows that *Slap Fight* could be very harsh at times.

Arcade games were well known for being designed to part players from their hard-earned cash and *Slap Fight* was no exception. It could be tough at times as enemies never missed an opportunity to fire at you and would often do it at short range, making it extremely hard to avoid some attacks. Oh, and they were sneaky buggers, too, often approaching from the bottom of the screen. In a further slap to the face there was absolutely no way to continue, meaning most players would only see everything *Slap Fight* had to offer if they cheated using save states on an emulator. The sheer ferocity of *Slap Fight* meant you were constantly kept on your toes, as it required you to play with your utmost concentration so you don't get hit by something you shouldn't. Too be honest, though, we actually like this approach. Even though *Slap Fight* was difficult, like many similar shooters, it was never unfair in the way it dished out punishment. Enemy attack waves were fairly slow and cleverly integrated into the landscapes. The vast majority of *Slap Fight*'s enemies were not in ships, meaning they attacked from set pathways. It became obvious




» [Arcade] *Slap Fight* doesn't feature a large number of bosses, but each and every one will test your mettle.



# CONVERSION CAPERS

Which were worth fighting for and which deserved a good slapping?




## ZX SPECTRUM

1987

■ There's a lot to love about Probe's Spectrum conversion. Nick Bruty's graphics are beautifully defined and well detailed, easily capturing the stylings of the coin-op. The weapon select system works well (providing you don't set spacebar to fire during configuration) and it moves at a fantastic pace. Sadly, the monochrome aesthetic, while undeniably stylish, makes it incredibly hard to spot and avoid bullets. It's worth noting that the arcade game also suffered from this at times, but it's a lot more apparent here.




## AMSTRAD CPC

1987

■ Like the ZX Spectrum port, this is another conversion by Probe. As with numerous other versions, it has the weapon select menu off to one side of the screen in an attempt to capture the original aspect ratio. Selecting weapons is handled in the same way as the Spectrum outing, but it benefits from far nicer-looking graphics. Unfortunately, the scrolling is a little juddery, while the sound effects are nothing short of horrendous. It plays well, though, and that's what's important.




## ATARI ST

1988

■ *Slap Fight* never made it to the Amiga, meaning the ST was the only 16-bit home computer to receive a port. It's pretty good, too, although there are a few issues with it. The biggest problem is that the aspect ratio isn't correct, meaning you have less time to react to enemies than you do on the arcade version. It's not a terrible problem, sure, but it does make the game a harder than it should be, and little bit on the unfair side. It's a decent shooter but we expect more from the ST.



## COMMODORE 64

1987

■ Highly regarded upon release, *Slap Fight* on C64 still stands up well today. John Meegan's slick coding results in some frantic gameplay and it uses the same weapon configuration as the other 8-bit ports. The biggest difference, though, is that it doesn't attempt to emulate the vertical ratio of the original arcade game, meaning that it suffers from enemies jumping out from nowhere – similar to the Atari ST version. It's one of the few home systems where enemies follow paths though, so that's good.

## MEGA DRIVE

1993

■ *Slap Fight* on the Mega Drive is easily the best home conversion of Toaplan's game. It's incredibly accurate, maintaining the ratio of the original arcade game, and has nigh on identical attack patterns and emulates some of the hidden score mechanics found in the original game. It doesn't suffer from the weapon-selecting issues of its 8-bit peers, and it adds the ability to choose single or rapid fire. It's a tremendous port from a console famed for its arcade conversions.

But that's not all, hidden in the option menu under 'Game Mode' is a brand-new version of the game called Slap Fight MD. This new mode greatly expands on the original game, with enhanced graphics, a cracking soundtrack by legendary composer, Yuzo Kushiro, and a brand-new weapon called the Typhoon Bomber. Your base ship is far larger than usual and is able to deliver a huge smart bomb that fills most of the screen. The downside is that using it greatly diminishes your ship's size, meaning it's back to collecting power-ups again.







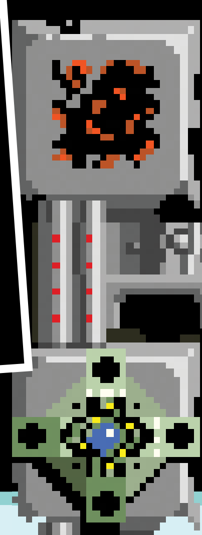
» [Mega Drive] The Typhoon Bomber is unleashed, taking out virtually everything on the screen. Boom!

when certain areas would be safe because there would be no way for an enemy to bypass whatever was on the ground and it gave *Slap Fight* a nice organic feel that other shooters lacked.

*Slap Fight* actually had a story to complement its relentless shooting, and while it's slight, it did explain where its alternative name, *Alcon*, originated. Set in the year 2059, mankind had mastered space travel and had colonised the planet Theon after aliens caused them to flee the planet Orac. Theon is now under attack, so the humans fought back using an Allied League Of Cosmic Nations fighter pilot to take the fight to those pesky aliens. Granted, it's not the greatest tale, but we'd imagine something got lost in the translation when it made the jump to the West.

*Slap Fight*'s success meant it was a shoe-in for a home conversion and it ended up on several systems. Ocean secured the game for its Imagine label and had numerous developers working on its various ports. The Amstrad and ZX Spectrum conversions were handled by Probe, the C64 effort was created in-house by coder John Meegan, while Abersoft Ltd. coded the Atari ST version. France Image Logical also created some ports of *Slap Fight* for the Thompson MO5 and TO7. Interestingly, only one console version was released, but it was a cracker. A collaboration between both Toaplan and MNM Software for the Mega Drive, it's not only the best home port, but also features a brand-new mode. Sadly, a small print run means you'll now have little change from £300 if buying it today.

*Slap Fight* may have packed a challenge, but it was also packed with great ideas, strong level design and plenty of satisfying boss fights. It's a testament to Toaplan's game design, that it still delivers a fun challenge some 30 years later. ✱



> “I loved shooters back then, but I wasn’t good at playing them”
> Nick Bruty



# A CHAT WITH NICK BRUTY

The Spectrum graphic artist gets back in the Slap Fight cockpit

**How did you end up working on the game?**
Probe Software got the contract and I was one of their few artists knocking around at the time. I worked on most of Probe’s Spectrum games.

**Had you played much of *Slap Fight*?**
Yes, I had played it in the arcades and was excited to work on it. We got [the] arcade game delivered to the office. When I say ‘arcade’, I mean the board in a briefcase! You can imagine how much playtime that received.

**How hard was it to replicate the distinctive-looking visuals of the arcade original?**
It was a very simple job once the decision was made to stay mostly monochromatic. Looking back, I wished we had used more colour but it didn’t fit well with the slow, smooth movement. If it was a fast-paced game I would have pushed for more colour use.

**Where you a fan of *Slap Fight*’s weapon system?**
Yes, I loved scrolling shooters back then, but I wasn’t particularly good at playing them. The weapon system helped me look like a better player. I had just converted *Xevious*, so it was a nice upgrade to then go to *Slap Fight*.

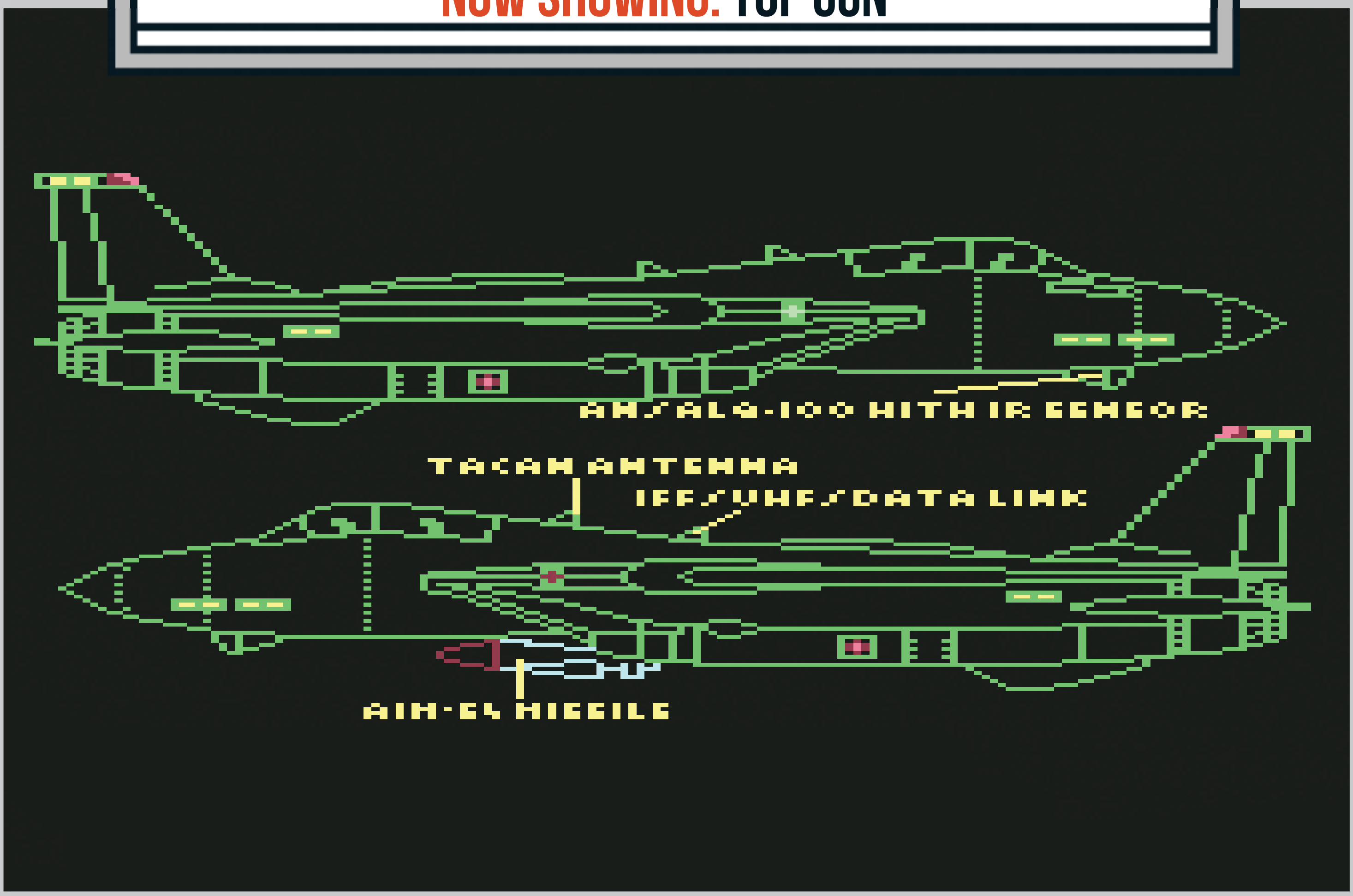
**What help did you get from Taito?**
I never had any contact with the publisher, which was typical when working with Probe, but the game was very straightforward to port. There just weren’t many options in which way to take it. Plus Dominic [Woods] already had an existing scrolling shooter engine so everything was understood from the outset.

**What difficulties did you encounter with Spectrum ports?**
A lot of times you weren’t supplied with maps or tools to look at the arcades data and art. You just had to play through the game time and time again to map it out. Most arcade games were smooth scrolling so there was always that headache. Smooth scrolling vertically was much easier than horizontally. Thankfully this was vertical but Dominic and I had to tackle horizontal later with *Metro-Cross*.

**How do you think the Spectrum port holds up compared to the arcade original?**
Dominic did a great job maintaining the frame-rate for the smooth scrolling to pay off, so the trade-off for colour was worth it. You never get all the time you would like to make the perfect port but having the tech in place saved a lot of development time, resulting in a more polished game.

# LICENCE TO THRILL

## NOW SHOWING: TOP GUN




**A turning point for Tom Cruise and an advert for the US Navy. But what else did Top Gun need? How about a videogame? Over to Ocean Software and Konami we go…**

### FILM

» **YEAR:** 1986
» **STUDIO:** Paramount
» **DIRECTOR:** Tony Scott
» **STARRING:** Tom Cruise, Kelly McGillis, Anthony Edwards, Val Kilmer, Tom Skerritt
» **BUDGET:** $15,000,000
» **BOX OFFICE:** $177 MILLION

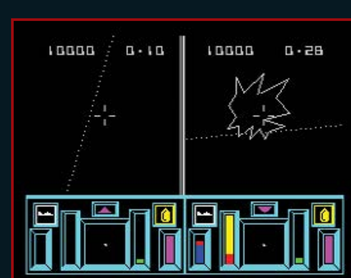
### GAME

» **YEAR:** 1986
» **PUBLISHER:** Ocean, Konami
» **DEVELOPER:** In-house

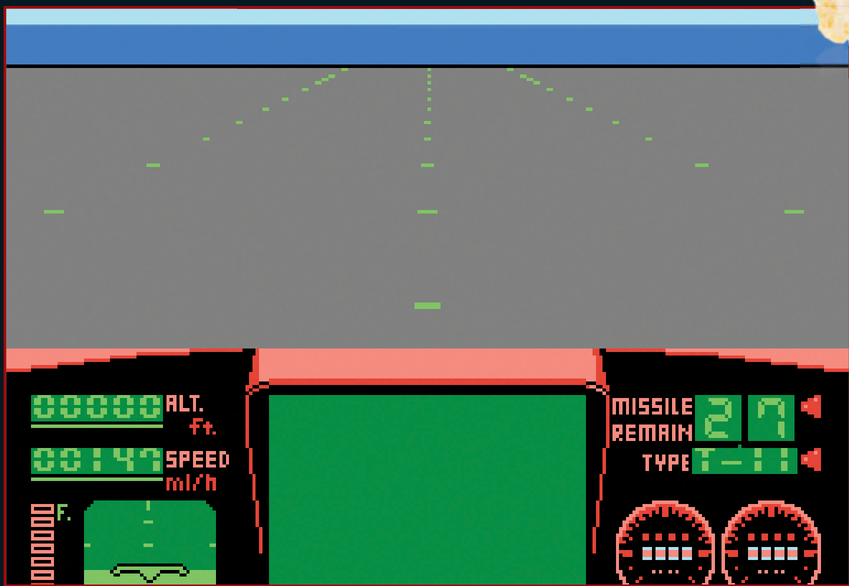
On 3 March 1969 the US Navy established an elite school for the top one per cent of its pilots. Its purpose was to teach the lost art of aerial combat and to ensure that the handful of men who graduated were the best fighter pilots in the world. They succeeded. Today, the Navy calls it Fighter Weapons School. The flyers call it: Top Gun.

So ran the introduction of Paramount's *Top Gun*, a much snappier title than the more-accurate *Fighter Weapons School*. The inspiration for *Top Gun* was an article published in California magazine in 1983. Written by journalist and military expert Ehud Yonay, 'Top Guns' highlighted life within the Miramar Naval Air Station in San Diego and included stunning images of real-life flights. The article captured the imagination of film producers Jerry Bruckheimer and Don Simpson, who swiftly optioned the rights to turn the feature into a movie, and began a search for writers. As recalled by one writer in Charles Fleming's biography of Don Simpson, *High Concept*, "It was two guys in leather jackets and sunglasses standing in front of the biggest, fastest f**king airplane you ever saw in your life." This was Simpson and Bruckheimer's high concept, and *Top Gun* would come to demonstrate the 'elevator pitch' style that was common in the industry at the time.

Script duties fell to the writing team of Jim Cash and Jack Epps, and they submitted their first draft in the Spring of 1984. Themes from Bruckheimer and/or Simpson movies past and yet to come were apparent: the absent father, the reckless romance and the loner hero who plays by his own rules – who is both admired and chastised for this. The plot focused on a group of elite pilots, all competing for the Top Gun trophy,



» [ZX Spectrum] For all its limitations, the Spectrum version of *Top Gun* at least moved at a fair lick.

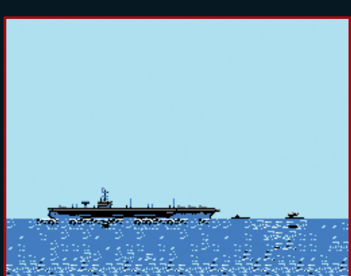



» [NES] Getting ready for takeoff.

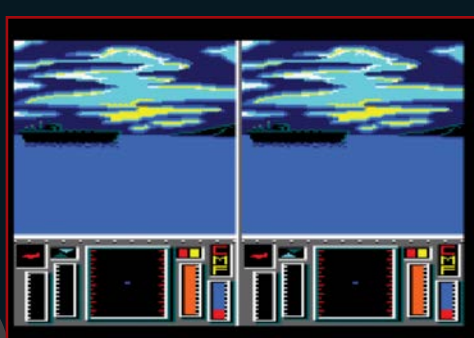
**“Maverick, it’s not your flying, it’s your attitude. The enemy’s dangerous, but right now you’re worse”**
Tom ‘Iceman’ Kazanski

with the hero (Maverick) experiencing the thrill of promotion, followed by despair at the demise of a close friend and the subsequent loss of his nerve and edge. Persuaded to return to the air, Maverick is triumphant in a showdown with an enemy force, bonds are formed with antagonists such as Iceman (Val Kilmer), and redemption is assured for the hero. And he gets the girl. *Of course*.

Directed with an ostentatious style by Tony Scott, a persuasive Don Simpson hooked in Tom Cruise to play the lead role of Maverick, with the remaining roles split between buff up-and-coming stars for Maverick’s fellow pilots (Rick Rossovich, Kilmer) and gruff characters actors for the experienced instructors and superiors (Tom Skerritt, Michael Ironside). Yet perhaps the most vital member of the crew was Pete Pettigrew, a retired admiral and flight instructor who also brought with him the co-operation and approval of the US Navy’s Top Gun school in San Diego. With Kelly McGillis playing civilian instructor Charlotte ‘Charlie’ Blackwood and a budget of $16.5 million secured from Paramount, *Top Gun* was ready for take off, and given its 100,000 feet of filmed air sequences, was never going to want for excitement. But the reviews were not kind, many critics decrying the movie’s flashy lack of substance and empty, soulless plot. The jump cut editing and fast-paced style gave *Top Gun* a rock video vibe that endeared it to few, mainly middle-aged, film critics. This was slick and loud moviemaking, calculated to hit the audience ▶



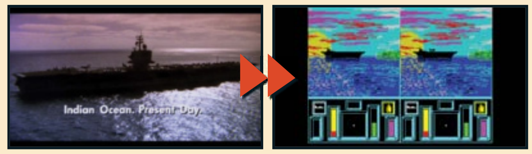
» [NES] After having tackled the landing segment the player received a welcome on board or a right dunking.



» [Amstrad] The Amstrad version of *Top Gun*’s elegant (and non-interactive) opening screen.

# MOVIE-TO-GAME COMPARISON

How scenes from the silver screen shaped up next to the various home console versions



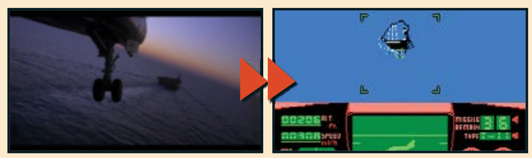

## THE USS ENTERPRISE

As you might expect, the aircraft carrier USS Enterprise features frequently in *Top Gun* as the platform for both dramatic takeoffs and landings. The beginning of the 8-bit versions mimics the vista but is non-interactive, mere window-dressing to the game’s vector graphic combat.



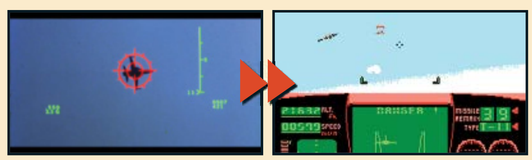
## BOOM!

Surprisingly, for a movie all about air combat, there are few explosions in *Top Gun*. Come the final battle, this changes as Maverick and his colleagues take on a clutch of MiGs, eliminating them with deadly missiles. Unsurprisingly, this combat forms the basis of the home videogames.



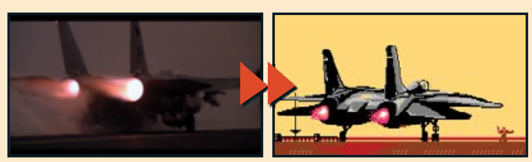
## STEADY AS SHE GOES

NES *Top Gun* contains elements missing from the other 8-bits, like this landing sequence. Under-plane cameras provided similar viewpoints in the movie, showing the carrier tantalisingly close. In the game, the player must make small adjustments in order to perform a secure landing.



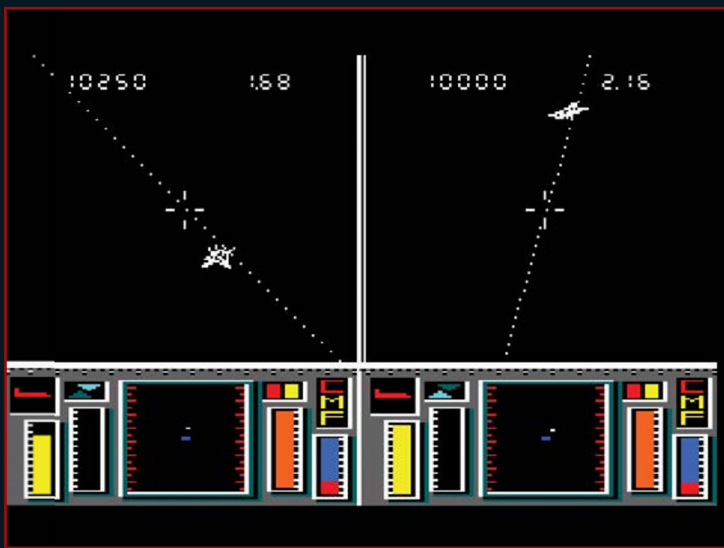
## LOCK ON

One of the key aspects of both the training and combat in *Top Gun* is the ability to lock on missiles, and the dramatic tension this causes. The NES version emits an annoying squawk whenever an enemy locked missiles to the player; stay in its sights for too long and it’s curtains for you.



## PREPARING FOR THE DANGER ZONE

*Top Gun* doesn’t waste much time in getting the viewer up close and familiar with its impressive flying machines, and the NES version copies this with a smart introductory graphic showing a Tomcat about to launch into the skies. Sadly, such frippery was missing from the other versions.






» [Amstrad] Not quite as grandiose as the film, we'll admit.

» [NES] Each NES *Top Gun* mission begins with a superfluous map.

» [NES] Land your plane on the NES version and get a cool bonus.




full-on, an audience that lapped it up in their droves. *Top Gun* would go on to earn almost $180 million dollars at the US box office alone, and not only establish or cement the reputations of those involved, but also revive the ailing fortunes of its studio, Paramount. "The production team of Simpson and Bruckheimer make great two-hour commercials," noted one critic, "and with *Top Gun* they give us the most expensive, most opulent Navy recruiting film ever made."

By the autumn of 1986, Ocean Software was beginning to ride out what had been a mixed year for the Mancunian games publisher. Disappointing TV-based licensed fare such as *Miami Vice* and *V* had given way to a number of quality titles such as *The Great Escape*, *Batman* and *Green Beret*. Ocean was still feeling its way in terms of movie licences (*Highlander* was awful, *Cobra* had been successful on the Spectrum but a flop on other formats, and the smash hit *Robocop* was still over a year away) but *Top* Gun appeared to be too good an opportunity to pass up: it was the number-one movie of the year, had a genuine star power, a hit soundtrack and, most vitally, a lean plot that could be jettisoned in favour of the airborne combat that appeared to suit a videogame adaptation.

"Gary Bracey had been appointed development director," says Mike Lamb, coder of the Amstrad and ZX Spectrum versions of *Top Gun*. "And had a brief to bring in some in-house developers. They had big licences but their games weren't the greatest; they wanted more control than they got with freelancers." Ocean realised the way forward was to employ its own programmers, artists and sound engineers. It didn't come cheap, but gave it more control, and eventually became cost effective. Freshly-hired, Mike was thrust straight into the limelight with the *Top Gun* licence. "It was ambitious in terms of getting a 3D vector graphics game working in four months," he grimaces. "Gary had hired me and another new guy to work on the Amstrad and Spectrum versions while another programmer worked on the Commodore 64. We were all a bit inexperienced."

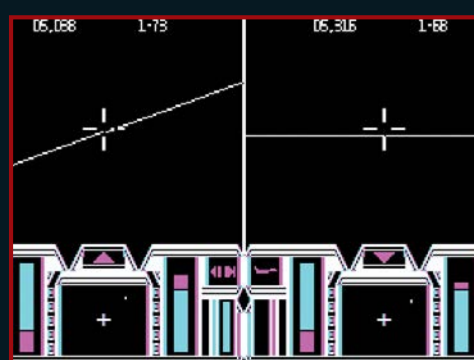
First up for Mike and his fellow coders was a trip to see the movie itself, an event he has mixed memories of. "I think the guys doing *Highlander* and *Short Circuit* got a trip to London for an advance screening – we had to watch *Top Gun* in a cinema in Manchester one rainy afternoon! We'd also read the script and seen extensive trailers. My impression was, 'ot as good as *Risky Business*, but the flight sequences were stunning'." Within a few weeks, Ocean had a working prototype of a split-screen flight

# NOTABLE VERSIONS OF TOP GUN



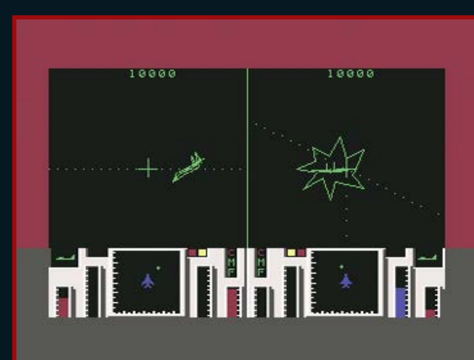
## AMSTRAD CPC

■ This is the original version produced by Ocean, coded by Mike Lamb, Amstrad *Top Gun* features more sound, of course, but it brought us a black-and-white display and limited gameplay system that would go on to be included in the other ports. And Kelly McGillis looks like someone's stolen her aviator sunglasses on the game's loading screen.



## PC-DOS

■ It's as limited as the other home computer stablemates and, unfortunately, even less playable, making Ocean's DOS conversion of *Top Gun* the worst of the bunch. Flickery graphics, a garish (almost incomprehensible) HUD, terrible sound effects and a general lack of any playability most definitely make this *Top Gun* one to fly over. Quickly.

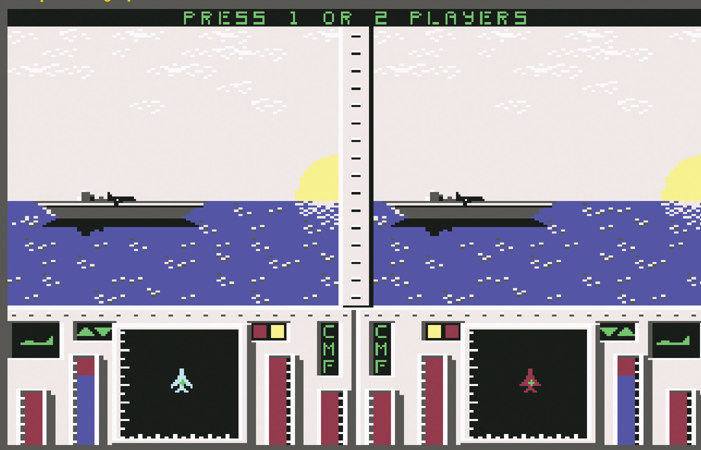


## COMMODORE 64

■ The C64 wasn't renowned for its vector graphics and *Top Gun* is no exception. Lacking the variety of all of the home computer versions, the C64 version plays slower and has the same monochromatic display (only now black mixed with a slightly sickly green). The sound is superior but this is still a missed opportunity given the wealth of excellent scrolling shooters on the computer.

> **"I feel the need…the need for speed!"**
> Pete 'Maverick' Mitchell

» [C64] The Commodore 64's opening scene takes place in slightly sunnier conditions.




combat simulation. "We were in offices across the road from the rest of Ocean," continues Mike. "People were coming over to play. It was fun as a two-player game, provided you had two joysticks." Unfortunately the team was under pressure; Ocean was keen to get the game out in time for Christmas 1986. "There wasn't time to do much more than that. I had to port everything to the Spectrum, fix bugs, and we shipped it. If the same situation happened today, we'd have said there's not enough time." As a consequence, Mike holds *Top Gun* in little esteem, despite it being his first game for the famous software house. "We could have done a better job on the 3D. Mike Webb [the original C64 programmer before Stephen Wahid] came up with an idea just before he left," he remembers. "I was storing prerotated vectors for the plane models. He pointed out that calculating them didn't need much CPU time and would save a lot of memory. I didn't do it because there wasn't the spare couple of days I needed, and wish I'd just done it anyway. Everything would have looked much smoother. And I should have looked at filling in the sea…" Japanese giant Konami secured the NES licence for *Top Gun,* and produced a different game with no split-screen mode and a greater variety of enemies. However, despite superior presentation, it too was criticised for being too repetitive, although the it was popular in the US.

Meanwhile, Ocean's game was playable enough to secure decent reviews, with *Crash* in particular bestowing it with a predictably exciting Oli Frey cover and Crash Smash status. "It just goes to prove that flight simulators are not necessarily boring," noted one *Crash* reviewer while *Your Sinclair*'s Phil South praised the game's vector graphics and the split-screen gameplay, before signing off, "It's lots of fun…and your one chance to pretend you're Tom Cruise." It's this last point that accounts for *Top Gun*'s success, both in the cinema and on home computers. Couple this with the game's entertaining and prescient two-player mode, and it's no surprise *Top Gun* scored big for Ocean and helped turn 1987 into one of its most successful years. *

## ARTISTIC LICENCE

These weren't in the film…

### SPACE FOR HARRIERS

■ By level two of the NES version, the player is beating off missile attacks from what looks like Harriers. Given the list of operators of the Hawker-Siddeley plane is quite small, this seems unlikely, unless Spain, India or (gulp) the UK is leading the charge against Maverick and the United States.



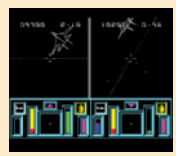
### TAKE YOUR PICK

■ In the NES version the player is able to select the missile of their choice prior to commencement. You never see Maverick or any of his peers involved with such decisions in the movie, or attack an enemy aircraft carrier for that matter.



### THE DARKNESS

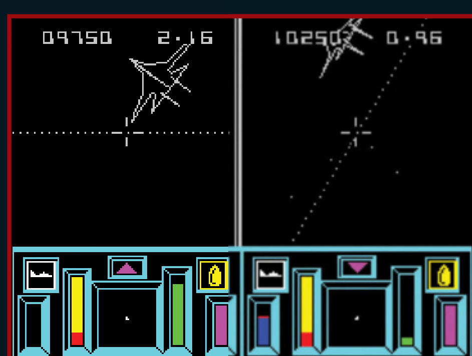
■ Most probably due to the limitations of the computers, but the stark black-and-white images of the Spectrum, Amstrad and C64 versions are far from most of the sun-streaked scenes of the movie. After all, Tom Cruise needed to wear those shades.





### NES

■ While it may not stick particularly rigidly to the movie, the NES port of *Top Gun*, developed by Konami, was superior to the Ocean games, offering a more diverse single-player experience alongside some colourful graphics. Extra segments such as a landing level also added to the fun factor. NES *Top Gun* is by no means a classic, but it's at least a serviceable shoot-'em-up.



### ZX SPECTRUM

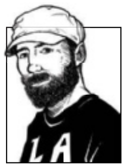
■ Curiously overrated at the time (*Crash* gave it 90% and Smash status and *Your Sinclair* gave it 8 out of 10), Spectrum Top Gun was again a decent attempt and a split-screen multiplayer game with sadly little else behind it. Fun for a short blast, it had little frills or variation, although its vector graphics moved at a fair pace and presented some striking 3D models.


SUNNY
SCORE: 1225
MONEY:

# Auf Wiedersehen Monty

STILL ON THE RUN

» RETROREVIVAL



» ZX SPECTRUM » GREMLIN » 1987

**As much as I have a lot of respect for all the creative developers that pioneered ambitious and complex gameplay concepts on 8-bit computers, it was always the simplest games that I enjoyed most.** I was only young, so directional control and a jump button was always going to make more sense than learning all kinds of complicated keyboard shortcuts – games like *Jet Set Willy* and *Dizzy* were immediately gratifying, meaning that's where most of my fond memories lie.

While my young eyes saw only colourful platform fun in the *Monty Mole* games, the older and (slightly) better informed me can see the political commentary that underpins the entire series. The fact I never saw it at the time is telling of the games' successes – they managed to be both an angry voice of the people *and* harmlessly enjoyable games in their own right, a pretty difficult marriage to get right. This third and final entry in the saga that sees Monty the intrepid mole fleeing for freedom on a Greek island after getting himself embroiled in the miner's strike (we are discounting bizarre spin-off *Monty Is Innocent!* and frustrating follow-up *Impossimole*) is arguably the best of the bunch, with less annoying random elements than previous titles.

Best of all, though, is the game's map. I still remember starting to sketch it out back when I was a kid and quickly coming to the mind-blowing revelation that the world actually seemed to form a fairly accurate map of Europe. Who says games can't be educational *and* great fun? *



# Minority Report

INTERESTING GAMES YOU'VE NEVER PLAYED



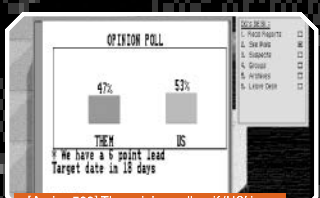



## AMIGA 500

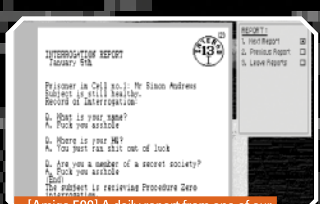
For this month's Minority Report, alleged YouTube 'content creator' Kim Justice is here to tell you that only the Amiga makes it possible for you to play these unheralded gems. Well, most of them anyway…




» [Amiga 500] The PM might be all smiles in public, but certainly not to you. Unsubtle warnings about flying lessons are his speciality.




» [Amiga 500] The opinion polls – if 'US' is up, you're doing okay. If 'THEM' ends up beating you, you might get a sudden, fatal visit from HR.




» [Amiga 500] A daily report from one of our interrogation rooms. It turns out that people who are under torture use colourful language often.

# FLOOR 13

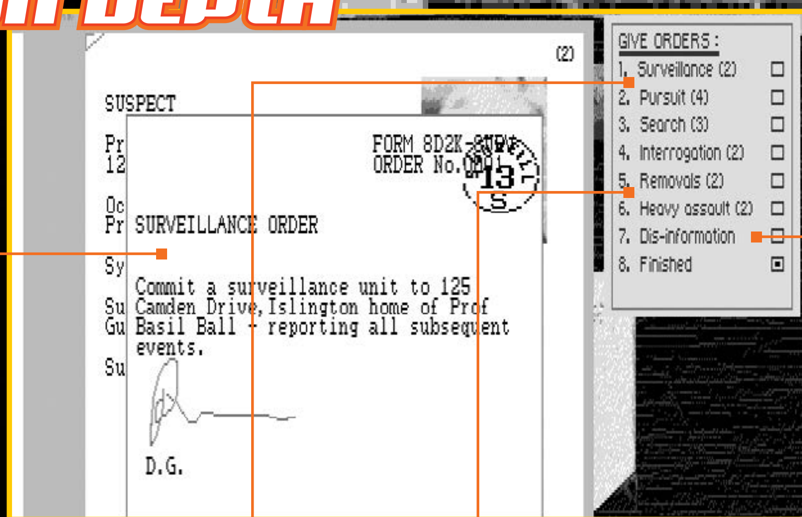
■ DEVELOPER: **DAVID J. EASTMAN** ■ YEAR: **1992**

■ This is a boring game. That doesn't seem like the ideal way to sell anybody on anything, but it's boring in a very special way, unlike any other. You are the newly-appointed director general of an innocuous government department that, on the surface, deals with 'Agriculture And Fisheries' – a place where promising political careers go to die. Behind the scenes, however, the department is a front for what is, essentially, a secret police designed to keep undesirable elements in check by any means necessary, from smear campaigns and misinformation to kidnappings and the occasional assassination. A place where the penalty for failure isn't political death, but literal death – usually via the window of your 13th floor office, located in the picturesque London Docklands.

The game takes place in segments, with situations developing over three-week periods that can range from someone getting ready to reveal disturbing secrets about the government, to an attack on the royal family itself. How you handle these situations determines how the government is performing in the opinion polls – if you're still in the lead, the PM might consider giving you a knighthood. If you go behind, he'll very subtly warn you that you should think about taking up flying lessons. There's also an underlying subplot concerning "The Secret Masters of Thoth", a sect which, apparently, pulls all the strings behind the scenes, and which you are a member of – every so often, members want you to pull the strings for them.

With such a vast Secret Police apparatus at your disposal, it can be tempting to deploy it with extreme prejudice. A shopkeeper was caught badmouthing the Prime Minister to some schoolchildren? Let's assign a heavy assault strike team straight away! Such play will result in a quick game over. This is not a James Bond simulator – this is a George Smiley simulator where you are, essentially, a civil servant. Dealing with situations requires patience, and discretion - the big heavy assault and assassination options are last resorts, only to be used when much more painless options like smearing and ransacking have been exhausted – this is supposed to be a secret department, after all. You have to be able to

## IN DEPTH




### TINKER
■ Another day, another person who has come under our watchful eye. This civil servant's a little bit leaky, and while it seems minor it would be foolish not to take action.

### TAILOR
■ These first options are all about info – get a van outside, put a tail on them, or rifle through their stuff. A smart way to kick things off, but it won't solve the problem.

### SOLDIER
■ The heavy stuff – capture them, kill them, or blow them up. These are last resorts, as people will talk and PM's will get angry. In this case, it might be an overreaction.

### SPY
■ 'Dis-information' is very handy – a problem can often be solved by smearing it in the press, and it makes the government look good. It seems like the best bet here.

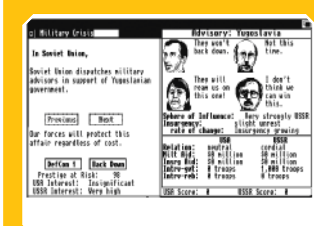


» [Amiga 500] Sadly for our director general, the HR department consists of a burly man who's good at pushing people through windows. Better luck next time.

see where the pieces are heading - there's no briefing at the start of the week to tell you just what's going to happen, and nor is there a fixed order – every new game of *Floor 13* shuffles the pack, encouraging multiple playthroughs.

There's very few games that can give you a sickly feeling in your stomach the way that *Floor 13* can. What you're doing is so innocuous, and yet so wrong and utterly against all the values of democracy. The black-and-white presentation only adds to it, because *Floor 13* employs no special tricks to try and buff the intrigue factor – it's as grey as an office brick, so much so that it goes all the way around to being utterly believable and addictive. This is the way democracy ends – not with a nuclear missile, but with a rubber stamp.

## IF YOU LIKE THIS TRY...



### BALANCE OF POWER - THE 1990 EDITION
AMIGA

■ Chris Crawford's game is a classic of the cold war – an unending battle of brinkmanship where you try and push the other side to the edge without launching bombs. Finance coups everywhere you can, listen to your advisors, and don't expect rewards for your failure.



### SHADOW PRESIDENT
DOS

■ Like *Balance Of Power*, but more in-depth – *Shadow President* is all about getting good approval ratings and not pissing off your advisors. You just know that the bomb is going to drop somewhere at some point, but so long as you're not there when it happens it'll go okay. A dark and powerful game.




### YES, PRIME MINISTER
SPECTRUM

■ For a lighter governmental affair, this adaptation of the classic Britcom will do the trick. It's mostly a text-based game where you pick Hacker's response, but the writers got the tone of the show spot on, and there's lots of witty back and forth. Highly recommended if you're a fan of the show.

# Minority Report

# ULTIMATE SOCCER MANAGER

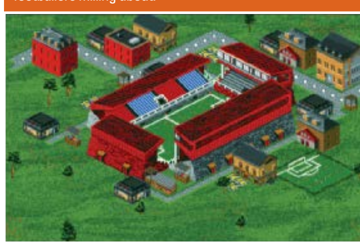
■ PUBLISHER: **IMPRESSIONS** ■ YEAR: **1995**

■ It feels odd to recommend a 20-year-old football management game, but *Ultimate Soccer Manager* is a special case – a game that obsesses over details in Molyneux-esque fashion, and allows you to do things that you cannot do in other footy games, before or since – making it something of an outlier in this tracksuit-based genre. There's no plot beyond getting your beloved team to the top of the league, and there's all the usual stats, injuries and match-day drama you'd expect from such a game, but some things are very different.

There's a sim element, where you can turn what was once a sodden patch of land into a thoroughly modern stadium – you can build roads, place programme stands, and hike up the price of the drinks at the bar. It's a great feature, allowing you to take a rest from the weekly grind of matches for a bit of *Sim Football Stadium*. Then there's the darker side, where you as the manager can be thoroughly corrupt – you can have a bet on your team's matches, try and rig a result in your favour, or offer a transfer target a sweetener to help seal the deal.

Being a dodgy dealer is quite hard, and being discovered will result in your sacking, but it's amazing that the options are there – and you probably shouldn't expect to see these features appearing in *Football Manager* anytime soon. There's also answering questions in the press years before anyone else did it, a Teletext display of all your results, and the ability to pull off your chairman's wig – along with all the regular footy goodness you could want. If you don't mind all the players being old and retired, this game is essential.



» [Amiga 500] It's our ground, complete with little ant-like footballers milling about.



» [Amiga 500] Kim, ever humble in her interviews is about to call the losing team "a pile of pants".




» [Amiga 500] After the match, you can relax in front of teletext and see how other teams got on.

## MORE GAMES TO PLAY



### » WEIRD DREAMS

■ DEVELOPER: **RAINBIRD SOFTWARE**
■ YEAR: **1988**

■ This early Amiga game consists of a series of side-scrolling vignettes that take place in the mind of someone going through lifesaving surgery. Every screen is filled with surreal sights and creations that'll pop your head if you get too close to them. A precursor to the likes of *Shadow Of The Beast*, this certainly isn't the best game to control but the experience is one you didn't usually get from games back then.



### » NO SECOND PRIZE

■ DEVELOPER: **THALION**
■ YEAR: **1992**

■ If you've got the need for speed, then this is for you. Aside from having the best title ever for a racing game, *No Second Prize* allows you to get on your bike and race at speeds you never thought were possible on your A500, complete with all the early 3D polygons you can eat. The mouse-only controls can be a challenge to get used to, but once you do? You simply won't be able to get enough of this game's adrenaline rush.



### » YO! JOE!

■ DEVELOPER: **SCIPIO**
■ YEAR: **1993**

■ Control Joe (presumably) as he jumps and hacks his way through various surroundings. A brilliant and thoroughly unheralded platformer with a nice difficulty curve and gloriously smooth animations, this is a game that, if it had been converted to consoles, would have done very well for itself indeed – but even the sheer Nineties-itude of it all wasn't enough for anyone to take notice. A game that shows off the A500 at its best.



### » FOOTBALL GLORY

■ DEVELOPER: **CROTEAM**
■ YEAR: **1994**

■ Croteam's Sensi 'homage' may not be worthy of the 95 per cent it got in *CU Amiga* back in the day, but it adds a lot to a familiar game – volleys, bicycle kicks, comical aftertouch, streakers, and a power-hungry ref amongst other things. It doesn't play as well as *Sensi*, but it's a decent footy game that has a big smile on its face. What else would you expect from the same folks who gave you *Serious Sam* and *The Talos Principle*?

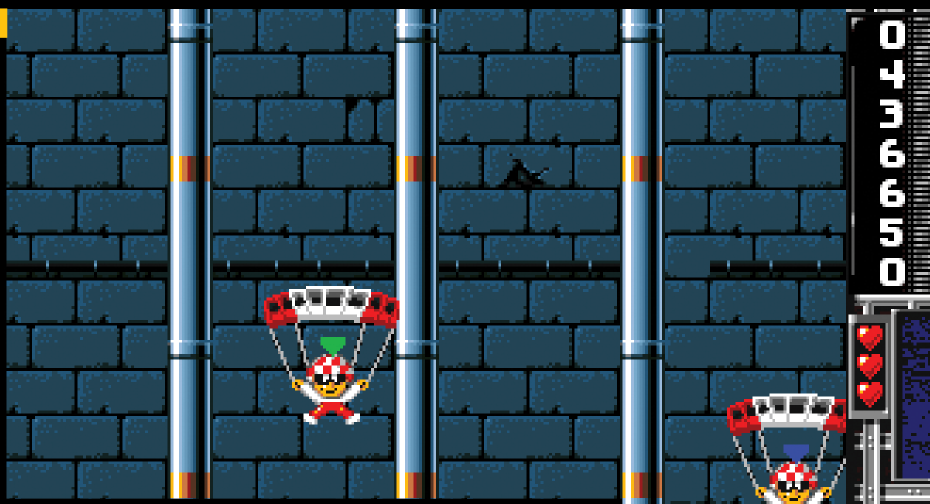
# BASE JUMPERS

■ DEVELOPER: **RASPUTIN SOFTWARE** ■ YEAR: **1994**

■ Despite coming out in 1994, *Base Jumpers* is perfectly playable on the A500 and more than worth spending time with – it's a funny platformer where you and a friend have to make your way up a tower, avoiding enemies and making combos of three letters for points. You'll get more points and a message if the combo makes sense, e.g. KEV (good at football), FED (FBI bonus) and so forth.

The second half of the game is, of course, a base jump! You can collect even more bonuses along the way, and you can also push other players in the way of pipes and flags and the like, which will result in their death. A little out of place for a cutesy game, but that doesn't mean you shouldn't do it whenever you can. It's fun enough to play in single-player mode, but the two-player mode makes it a blast – you can fight to be the first up on the roof, and the first to make your way safely to the ground without losing your limbs.

A boatload of other minigames floating around makes *Base Jumpers* a nice party game – there are issues with the controls and scrolling that can be a problem, but it's so charming that they can be overlooked. If only it hadn't been released at a time when the Amiga was pretty much done and dusted, this game could've been a big hit.





» [Amiga 500] One of the many three letter bonuses you can grab. This one will add a "TAD" of points to the all-important score.



» [Amiga 500] Alas, the score doesn't mean a whole lot when you meet a sudden end at the hands of a drainpipe.

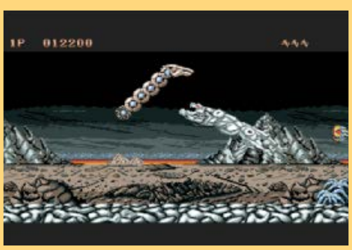
**"A boatload of other minigames floating around makes Base Jumpers a nice party game"**

## RETRO STINKER

### » NINJA GAIDEN II: THE DARK SWORD OF CHAOS

■ DEVELOPER: **GAMETEK** ■ YEAR: **1991**

■ A port of such low quality it has to be seen to be believed, *Ninja Gaiden II* on the Amiga maps the attack command to up and right on the Joystick. Amazingly, this is the least of this game's problems.



## » ST. DRAGON

■ DEVELOPER: **STORM**
■ YEAR: **1990**

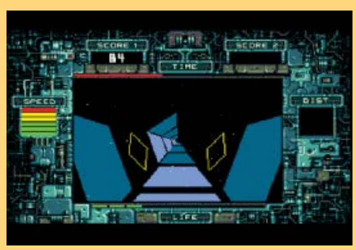
■ A highly challenging and well-turned-out horizontal shoot-'em-up, the Amiga's *St. Dragon* is by far the best way to play this largely-forgotten arcade game in the home. Shots and enemies come at you thick and fast, and often the dragon's segmented tail, carefully positioned in front of you, is the only thing that'll stop their assault. This is a game that demands constant engagement, and it's a corker of a conversion.



## » HILL STREET BLUES

■ DEVELOPER: **KRISALIS**
■ YEAR: **1991**

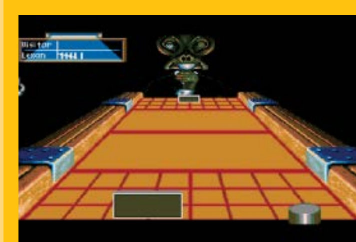
■ A strange yet obvious use for a licence, *Hill Street Blues* allows you to manage your own police force! Take a bird's-eye view of the city streets and send all of your favourite cops to deal with various crimes while getting familiar with proper codes and procedure. The interface can be somewhat baffling, but it's a nice companion piece to *Police Quest*. And yes, Sgt Esterhaus does say, "Let's be careful out there."



## » PSYBORG

■ DEVELOPER: **LORICIELS**
■ YEAR: **1992**

■ Even with the likes of *No Second Prize* kicking around, this could be the Amiga's speed king – a frenetic tunnel racer where you have to constantly move from line to line while travelling at warp speed, with tight controls and face-ripping sounds. *Psyborg* has the feel of a classic arcade vector game, and if you're fond of the likes of *S.T.U.N. Runner* and *SkyRoads* then this will blow your mind – an essential game for everybody.



## » SHUFFLEPUCK CAFÉ

■ DEVELOPER: **BRØDERBUND**
■ YEAR: **1988**

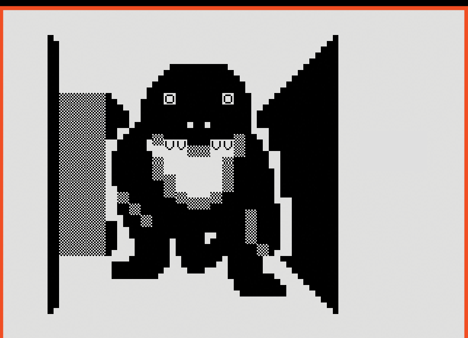
■ In these days when a good arcade is ever harder to find, it can be a challenge to find a decent game of air hockey. If you don't have a table close by, then Brøderbund's sim is a good way of playing – it's fast and furious, and features a whole load of strange creatures for you to battle against. As long as you resist the urge to chuck your mouse through the monitor when you lose, this'll be a treat.

# INSIDE THE sinclair ZX81




**It has been 35 years since Sinclair changed the UK computing landscape with the release of the ZX81. With help from key people, Martyn Carroll celebrates the micro that was small in size but not in stature**

The Sinclair ZX81 was billed as a 'personal computer', as were many micros before IBM commandeered the term for its PC line. The earlier ZX80 was marketed in the same way, but the ZX81 was a better advocate for the general term. It was more affordable for a start, being available for as little as £50 when it launched in March 1981, which was almost 40 per cent cheaper than the ZX80. The cost reduction was chiefly down to its rejigged circuitry which consisted of just four chips, compared to 21 in the ZX80.



» [ZX81] *3D Monster Maze* showed off the ZX81's potential.

Not only was it better value but it introduced new features that made it more suitable for general, non-technical individuals. A key problem with the ZX80 was multitasking – or rather the lack of it. The Z80 processor really was the heart of the system with very few support functions, so it couldn't update the screen while it was executing code or reading the keyboard. This effectively ruled out animated games, although coders did devise a clever, if inelegant, solution where code could be ran during the display's vertical blanking interval. The ZX81 tackled the problem in the same way, but added a NMI (non-maskable interrupt) generator to achieve it in hardware. This improved interactivity, making dialogue with the machine feel more tactile as your inputs were visualised on the screen. It also threw the door wide open to games.

Yet the ZX81 certainly wasn't designed with entertainment in mind. According to John Grant, who worked alongside Steve Vickers to update the ROM for the new machine, Sinclair's chief wish was to improve the mathematical functions as the ZX80 only supported integers. "The brief from Clive didn't




» The manual featured original artwork by John Harris. Even though the ZX81 was small and unassuming, this sci-fi image suggested hidden scale and complexity.




## Tech specs

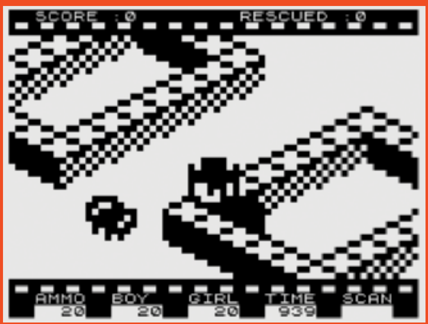
| | ZX80 | ZX81 | ZX SPECTRUM |
|---|---|---|---|
| Processor | Z80A | Z80A | Z80A |
| **Speed** | **3.25MHz** | **3.25MHz** | **3.5MHz** |
| RAM | 1K | 1K | 16K / 48K |
| **ROM** | **4K** | **8K** | **16K** |
| Resolution | 32x24 characters | 32x24 characters | 32x24 characters, 256x192 pixels |
| **Colours** | **Monochrome** | **Monochrome** | **15** |
| Sound | None | None | One channel, ten octaves |
| **Keyboard** | **40 key membrane** | **40 key membrane** | **40 key rubber sheet** |
| Size (WxDxH) | 159 x 208 x 37mm | 167 x 175 x 43mm | 232 x 144 x 30mm |
| **Weight** | **375g** | **350g** | **552g** |
| UK Launch Price | £79 (kit), £99 (assembled) | £49 (kit), £69 (assembled) | £125 (16K), £175 (48K) |

# Homebrew Interview

## Coder and demake expert Bob Smith has helped to revive the ZX81 in recent years

**Why did you decide to create new games for the ZX81?**
After writing ten or so Spectrum games, and with that scene becoming increasing healthy with new games, I decided I needed a new challenge. At about the same time my original ZX81 was found after a loft clearance, which made me curious as to the state of modern games for the machine. I found that they were still mostly written in BASIC, jerky, and unresponsive – just like many of the games 30 years earlier. I was sure that I could do better with the knowledge I had gained from the Spectrum.

**How did you get on with the ZX81 back in the day?**
I was quite young when I first saw one – nine or so – but I found typing in programs from books fascinating and slowly learned to program in BASIC. This led to getting a Spectrum and more programming, all the way to a career as a programmer. The ZX81 was definitely the spark for my programming and professional life.




**What has been the general reaction from gamers in regards your ZX81 releases?**
The reaction has been overwhelmingly positive, although, for some, the Zeddy will never really be a games machine. The games are well liked amongst a small but very appreciative audience, and the modern conversions attract the attention of the wider audiences, especially my conversion of *Crossy Road*. The licence holders are usually aware of the machine, most having had one, and so long as I respect their copyright and don't make a profit they are very supportive of my work.

**What are the main technical challenges you face when coding on the ZX81 today?**
Memory and speed are the main two challenges, especially as they are linked. You can make code faster by unrolling loops but that takes more memory. There are usually aspects in every game which take a lot of thought to work around, but as a programmer that's half the fun.

**What's next for Bob's Stuff on the ZX81? Do you have any specific games or style of game that you would like to attempt in the future?**
I don't currently have any plans for the ZX81 at the moment as I'm writing an isometric engine for the Spectrum. I do still have a 3D *Wolfenstein*-style engine for the system which I think should one day be put to use in a released title, and the whole concept of doing 3D on the machine is an interesting challenge. Maybe one day I'll do an *OutRun* or *Mercenary*-style game.

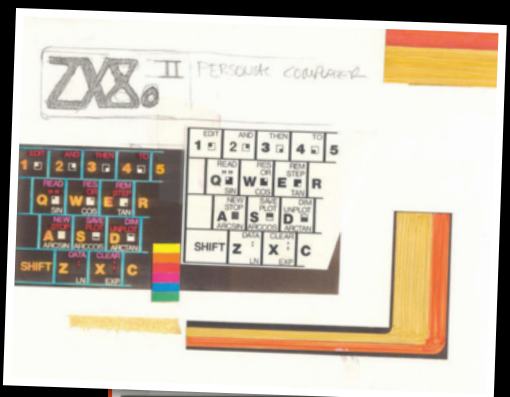
go down to a great level of detail," he recalls. "The main requirement was the floating-point functionality, and Steve implemented the Chebyshev polynomials that were used for all of the trig functions. The big difference between the ZX80 and ZX81 was the ROM size. The bigger ROM was a result of Moore's law."

John is referring to the doubling of the ROM size, up to 8K in the ZX81. The extra space enabled the team to beef up Sinclair BASIC with extra commands while still retaining the one-touch keyword entry system and line syntax checker – two of the ZX80's respected and user-friendly features. "I made the keywords single keystrokes partly to help people who were new to typing but also because not having to recognise keywords saved some ROM space," says John. "Similarly, I didn't want our users to have to suffer being told by the compiler that they'd made the same mistake in half a dozen places. Also, by compiling each line as it's entered you keep the program in a more compact form – useful when there's only 1K of RAM."

The ROM size might have doubled yet the internal memory was pegged at a meagre 1K, making a




» Rick Dickinson standing outside the Sinclair Research offices.

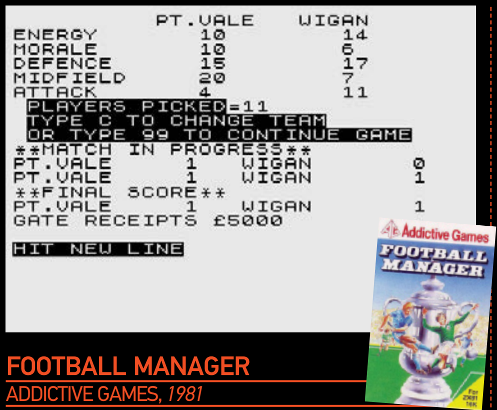



» Rick's sketch of the updated ZX81 keyboard layout. Note the introduction of the trig commands, SIN, COS and TAN.



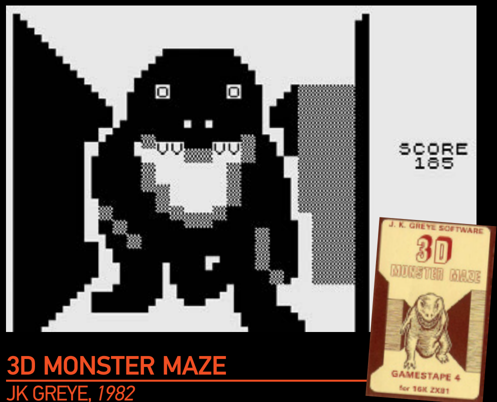

» Before settling on ZX81, the computer was referred to as the ZX80 II, the ZX80 Series B and even the ZX90.

## Defining Games




### FOOTBALL MANAGER
ADDICTIVE GAMES, *1981*

■ This Kevin Toms classic debuted on Tandy TRS-80 hardware but it was on the ZX81 (and ZX80 with the 8K ROM upgrade) where it really romped to victory. This version was text-only with no animated match highlights but once it grabbed you there was no letting go. Addictive Games indeed.




### 3D MONSTER MAZE
JK GREYE, *1982*

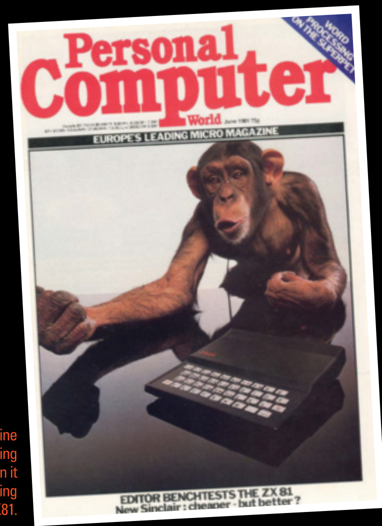
■ Easily the most famous and influential title available for the computer. It seems ridiculous to use words like 'atmospheric' and 'tense' when talking about a silent ZX81 game, but Malcolm Evans really did raise the old neck hairs with this proto first-person title. The 3D effect is still surprisingly effective.

> **"I made the keywords single keystrokes partly to help people who were new to typing"**
> John Grant

RAM expansion pack a mandatory purchase. The display remained monochrome and sound was still nonexistent. The ZX81 didn't *look* the same however, and not just because the casing was the traditional Sinclair black instead of white. The ZX81 was the first computer designed by Rick Dickinson and he was keen to evolve John Pembleton's ZX80 design while still retaining its sleek form factor.

Clive's preference was for a small, neat and elegant package," says Rick, who joined Sinclair as an in-house designer in 1979. "As the ZX81 followed on from the ZX80 it was important to show this aspect as well as the evolution of the design with a natural and fairly obvious progression. I don't try to add my stamp to a design but I do attempt to evolve the design further with the benefit of changes in technology. We were able to use injection moulding for the casing instead of vacuum forming as used on the ZX80. This allowed for more freedom with shape and detailing and was the major single plus to hit the aesthetics."

The ZX81 was tiny, measuring 167mm wide by 175mm deep by 43mm high. This resulted in a footprint that was 12 per cent smaller than the ZX80. It really was no bigger than it absolutely needed to be. The width was dictated by the minimum possible practical width of the keyboard, which needed to feature 40 keys, while the depth was just enough to house the PCB. The tallest component on the PCB was the TV modulator so this was positioned at the rear and the case sloped up to accommodate it, giving the computer its distinctive wedge shape.



» *PCW* magazine was monkeying around when it came to testing the ZX81.

To keep costs down Sinclair kept faith with a membrane keyboard, but the technology behind it had improved and this aided the design process. Rick explains: "The membrane manufacturer had made inroads and we could purchase a customised subassembly of the keyboard with a small connector to the PCB. The ZX80 membrane required that the PCB be used as the base substrate, but now I didn't have to extend the PCB size just to accommodate the keyboard area, so this was a great improvement in terms of design options. The surface textures and print quality for the membranes also improved and this benefited the aesthetic characteristics."

Rick's work on the ZX81 eventually won him a Design Council Award, but not everyone was enamoured by the machine's appearance, with some critics noting its 'toy-like' qualities. Could such a modest, low-cost device really cut it as a computer? The general consensus was that the ZX81 was an ideal introduction to personal computing. Dave Tebbutt of *PCW* magazine was one of its admirers, writing: "If you know nothing about computers and you want to enjoy finding out about them, then this ▶

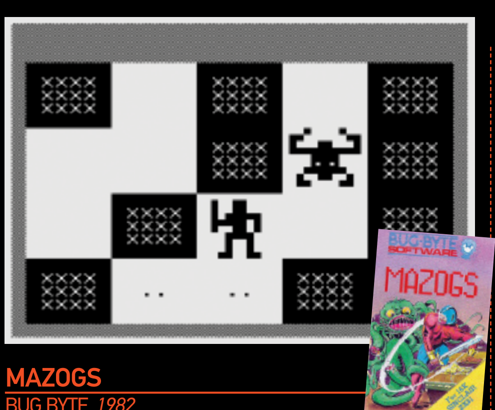
## Failing Memory

### How a design flaw led to the infamous 'RAM pack wobble'

**The ZX81 has received ridicule over the years, with the biggest snigger reserved for its wobbly RAM packs. This failing occurred because the RAM pack slotted into the expansion port, and it could lose contact if knocked, nudged or breathed on, causing a crash and the system everything in memory. Not great if you'd been typing in a huge listing from *C&VG*.**

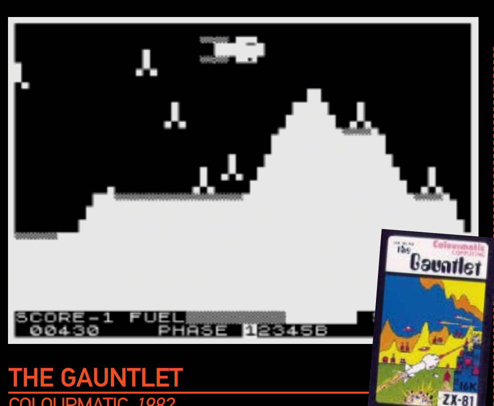
**Rick Dickinson reveals that he wanted to improve the design. "The 16K RAM pack used for the ZX81 was the same as the one designed for the ZX80. I wanted to redesign it but Clive thought it would be okay. I was not keen as my intention was for a more snug fit and a screw fitting. This would have helped with RAM pack wobbles, although the main cause of that was the lack of a gold flash to the PCB edge connector fingers, allowing for a rapid build-up of an oxide layer."**



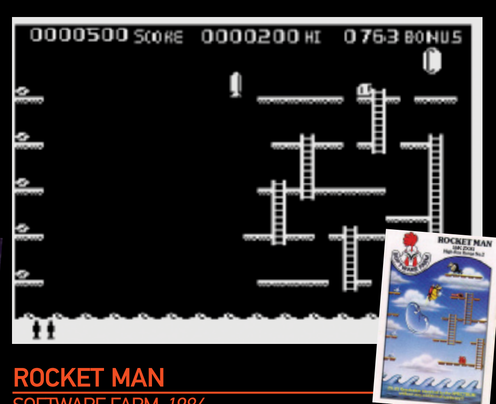

### MAZOGS
BUG BYTE, *1982*

■ Don Priestley made a name for himself on the Spectrum with titles like *Popeye* and his fondness for using large sprites extended back to this polished arcade game. Trying to escape a randomly-generated maze filled with nasty Mazogs was thrilling. Don later remade it for the Spectrum as *Maziacs*.



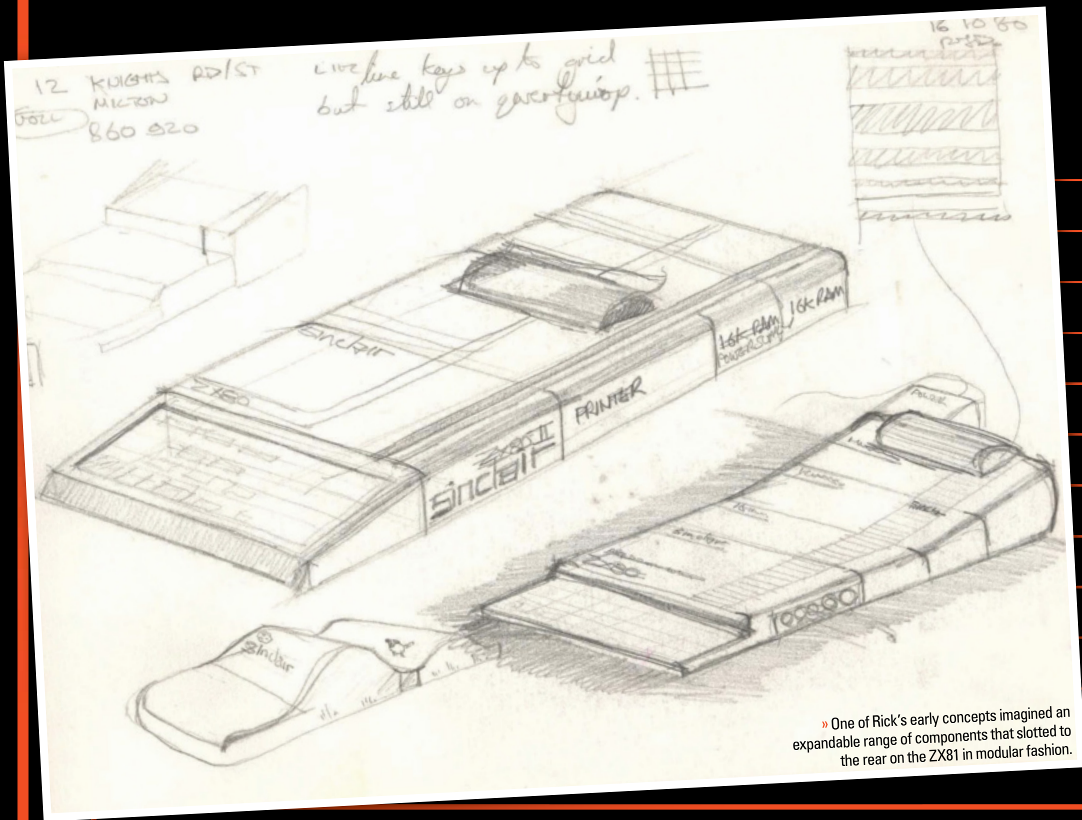

### THE GAUNTLET
COLOURMATIC, *1982*

■ There were loads of coin-op clones on the ZX81 and this simple version of Konami's *Scramble* was probably the best. Yes, you fired lethal full stops and dropped deadly semicolons, but if you overlooked the basic presentation you were left with a challenging and playable version of the original.




### ROCKET MAN
SOFTWARE FARM, *1984*

■ How do you produce high-resolution graphics on a stock ZX81? You do what Software Farm did and code your own video display routine. The firm produced four titles using this clever technique and this fun platformer was the best, proving that the aging ZX81 was still capable of surprising gamers.




» One of Rick's early concepts imagined an expandable range of components that slotted to the rear on the ZX81 in modular fashion.

machine offers a value for money way of doing just that. Children will love the ZX81 and I suspect that more than a few people who are already familiar with computers will buy one, just to have a bit of fun."

So kids and hobbyists were catered for, but what about the all-important man in the street? Could the ZX81 really crack the mass market? Sales of 400,000 in its first year, rising to a million at the end of year two soundly answered that question (by comparison, total sales of the ZX80 were reported to be around the 100,000 mark). It was the right product at the right price – and it was in the right place too, as the ZX81 was made available on the UK high street and not just via mail order. The machine also performed well overseas, notably in the US where it was licensed by Timex.

If there was any doubt about Sinclair's sales claims you only had to look at the cottage industry that sprang up to support the machine. *Sinclair User* magazine debuted in early 1982 and it was full of adverts for ZX81 hardware add-ons. Sinclair did release the ZX Printer and a 16K RAM pack, but its main focus was the development of its next computer,

# Under The Hood

**Revealing the key components of the ZX81**

### UNCOMMITTED LOGIC ARRAY

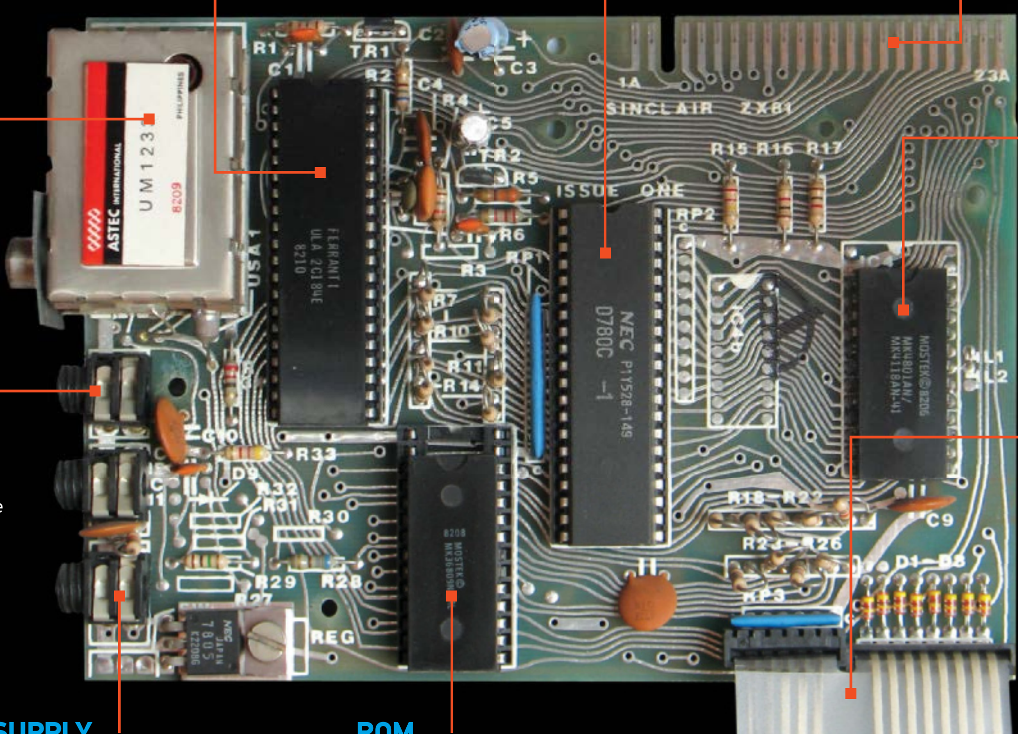
■ The Ferranti ULA combines multiple logic chips into a single chip to simplify the internal design and reduce costs.

### CPU

■ The heart of the ZX81, a Zilog or NEC Z80A processor running at 3.25MHz.

### EXPANSION PORT

■ The edge connector at the rear of the machine is used for attaching memory packs and other peripherals.




### TV MODULATOR

■ This outputs video to a television set. Rick Dickinson says: "I positioned the modulator at the back as it was the highest component by far."

### RAM

■ The 1K of internal memory, provided as either a single chip (as seen here) or a pair of 512B chips.

### CASSETTE SOCKETS

■ Ear and Mic sockets for connecting a tape recorder. "I preferred the jack sockets on the side rather than the rear as they were more accessible," muses Rick Dickinson.

### KEYBOARD CONNECTOR

■ A ribbon cable connects the board to the touch-sensitive membrane keyboard.

### POWER SUPPLY

■ An input for connecting a 9V DC power supply. The chip to the right is the voltage regulator.

### ROM

■ The 8K ROM chip contains the system software and the extended version of Sinclair Basic.

**"It was hugely important in its own right. We owe Sir Clive Sinclair a huge debt of gratitude"**
Charles Cecil

the ZX Spectrum, and this opened up the market to enterprising outfits. If you wanted more memory then RAM packs of up to 64K were available. If you disliked the membrane keyboard then you could buy an alternative with proper moving keys. There were boards for sound and colour graphics too, plus all manner of weird and wonderful interfaces.

One vital purchase was a cassette recorder so you could benefit from the massive amount of prerecorded tape software that became available. Well-known gaming names like Quicksilva, Bug-Byte, Mikro-Gen and Silversoft owed their existence to the ZX81, as the market was now big enough to support proper commercial businesses with full-time employees.

Boss of Revolution Software, Charles Cecil, began his career on the ZX81, not long after leaving school. "I became friends with Richard Turner who had just disassembled the ROM of the ZX80 and set up a company, Artic Computing, to publish the source code. When he invited me to write an adventure game for the newly-released ZX81 I jumped at the chance." Charles wrote three text adventures for the machine and remembers how he'd sell them directly to retailer WHSmith by phoning head buyer John Rowland. "I'd put on my best business voice and tell him that I had written a new adventure game – and he would generally order 5,000 units at about £5 each. I would then phone the printer and ask them to print 5,000 covers and send them to Ablex cassette duplicators, then phone Ablex and tell them to expect the covers and to duplicate 5,000 cassettes and send them to WHSmith. And at the weekend we'd issue the invoices and pay the bills. It was wonderfully naive but it worked."

Like most developers Artic hopped over the Spectrum when it debuted in 1982. The new computer introduced colour, sound and a better



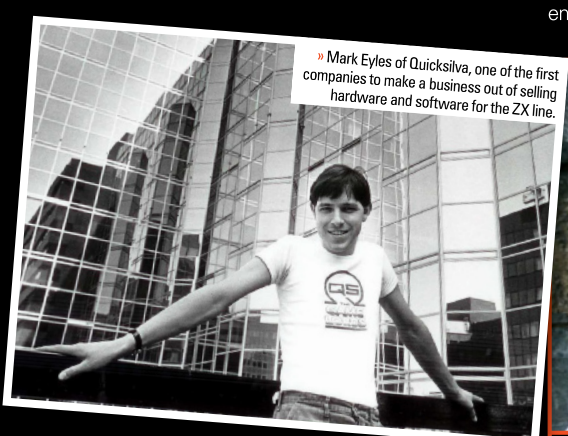
» Rick collecting his Design Council Award from the Duke of Edinburgh for his work on the ZX81. He recalls it being "a wonderful experience".

keyboard, and it wasn't directly compatible with the ZX81 so it effectively superseded the earlier model. Sinclair didn't end manufacture, though, and instead positioned it as the firm's low-cost option by further reducing its price. That strategy appeared to work for Sinclair as the ZX81 was reportedly still shifting 30,000 units a month by mid-1983 despite the Spectrum doing mega business.

While the ZX81 is seen as the stepping stone between the primitive ZX80 and the highly-popular Spectrum, it certainly shouldn't be dismissed as just that. "The ZX81 was a stepping stone," says Charles, "but it was hugely important in its own right. We owe Sir Clive Sinclair a huge debt of gratitude."

John Grant comments: "The ZX81 was a halfway house on the way to the Spectrum. If the ZX81 hadn't been produced, Sinclair would have had to go on selling the ZX80 and I don't imagine it would have compared that well with the competition by the end of the second year. So the ZX81's role was to keep up the momentum."

Rick Dickinson is also appreciative of the computer's place within the evolving ZX line. "The ZX81 was a clever piece of design and heralded many firsts," he says. "The Spectrum was an evolution of the ZX81 just as the ZX81 was an evolution of the ZX80. You could argue that the ZX81 was a stepping stone, but to me they're all stepping stones in strict chronology. There were always technological advancements to implement. As for the ZX81 in isolation, it is my favourite, and I've also heard Clive comment that it's his favourite, too. But aside of favouritism, it was the computer that broke the mould in many ways and encouraged others to emulate or develop further." *



» Mark Eyles of Quicksilva, one of the first companies to make a business out of selling hardware and software for the ZX line.



» Revolution's Charles Cecil, who began his career writing a series of successful text adventure games for the ZX81.

# In The Know

## IT PROVIDED AFFORDABLE ACCESS TO GAMES

■ Retailing for less than £50 (in kit form), the ZX81 was the original low-cost computer and an inexpensive gateway to games galore.




## IT HELPED CREATE THE UK SOFTWARE INDUSTRY

■ Countless software houses (like Quicksilva, pictured above) were formed, laying the foundations for the home-grown gaming market.



## IT GAVE GAMING LUMINARIES A LEG UP

■ Many well-known developers cut their coding teeth on the ZX81 including the likes of Costa Panayi, Raffaele Cecco and Jon Ritman (pictured).

## IT POPULARISED FIRST-PERSON GAMES

■ With the release of *3D Monster Maze* in 1982, the ZX81 was home to the first game to deliver true first-person thrills.



## IT HELPED SHAPE THE SPECTRUM

■ The ZX81 influenced the design of the Spectrum which would become one of the biggest-selling and best-loved 8-bit computers.

CLASSIC MOMENTS

# Another World

» **PLATFORM:** AMIGA » **DEVELOPER:** DELPHINE SOFTWARE » **RELEASED:** 1991

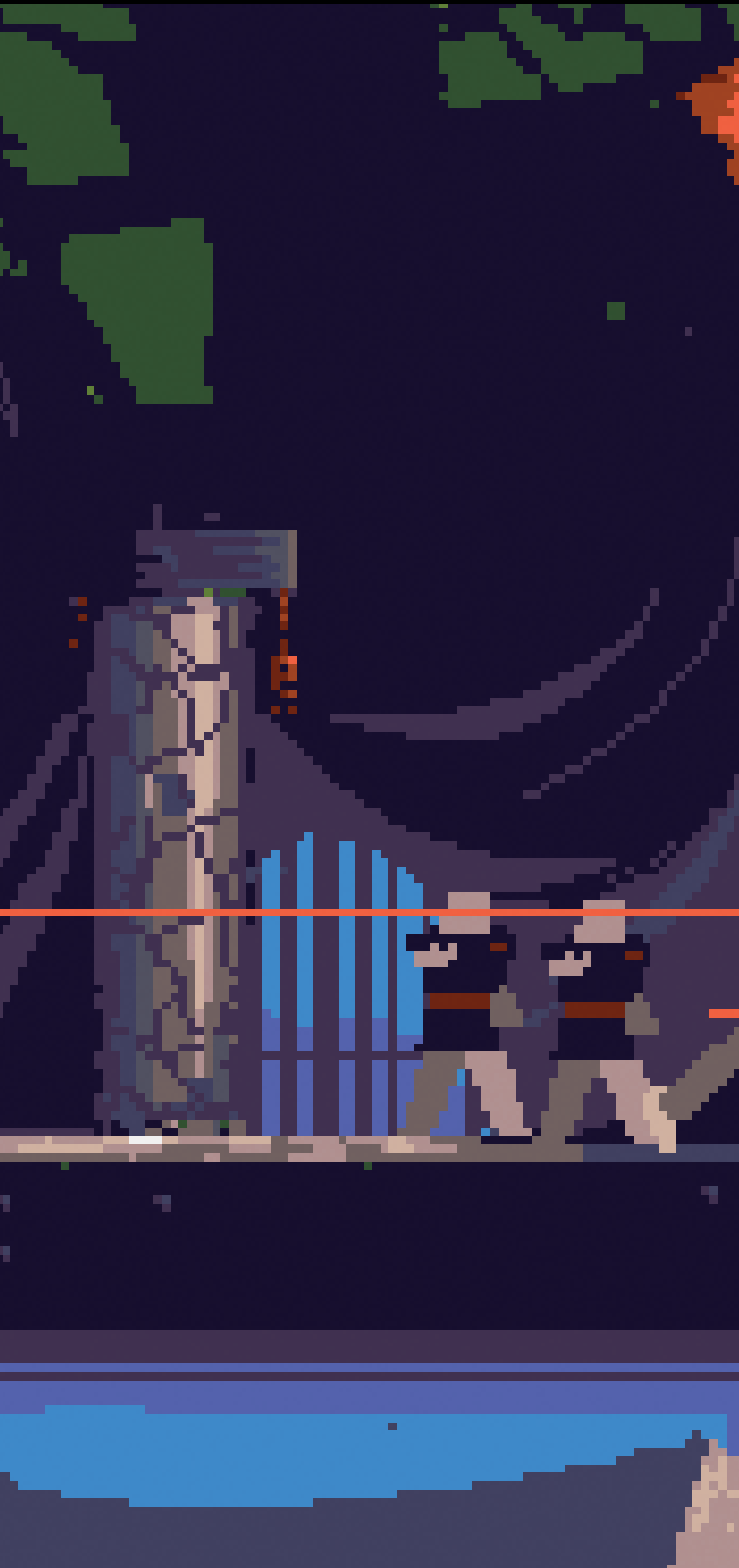
Since his particle physics experiment went awry and stranded him on an alien planet, Lester Knight Chaykin has had to deal with some pretty hostile locals. In fact, they're almost unanimously agreed that despite his initial lack of aggression, he should be shot, captured, eaten, poisoned, and put to death in any number of other ways. He learned pretty early on that pacifism wasn't going to cut it, but he's still been trying to avoid provoking anyone – until now. Having had enough of his state of constant threat, he's finally gone and done something to earn the ire of his persecutors.

As a group of aliens relax in a luxurious bathhouse, displaying their naked forms for all to see, Lester comes crashing into the room through the roof – not only shattering the beautiful stained glass window, but causing the patrons to panic and flee. As the nearby guards let rip with a barrage of laser fire from every direction, you can only think to yourself, "Oh boy, I've really done it this time…" *



## BIO

Having been impressed by the Amiga conversion of *Dragon's Lair*, French programmer Éric Chahi was convinced he could create a similarly cinematic effect with polygonal graphics. The result was an absolutely astonishing platform adventure game, with unparalleled animation and a story told entirely through cutscenes and set-pieces – in many ways, it's a precursor to modern games. An initial release on the Amiga and Atari ST was well received by the press and quickly followed by conversions to a variety of other platforms, including the Mega Drive and SNES. Over a million copies have been sold during the game's lifetime.



# MORE CLASSIC ANOTHER WORLD MOMENTS

## The Beast



The early part of *Another World* shows you just how quickly things can escalate. You've managed to avoid drowning, ran away before the tentacle can snatch you back into the water, and squashed at least a dozen poisonous slugs. No time to rest, though – this beast is on your tail and wants to tear you limb from limb!

## A Tiny Leak



Much of the danger in *Another World* comes from the native population, so mid-way through the game it's a surprise to find yourself creating your own problems. You need to flood the cavern to progress, but be ready to run – as soon as you've fired your gun, water will rush through and your nearest safe haven is a few screens away.

## Deception



Your alien pal Buddy, a fellow captive from the prison you escaped from earlier in the game, isn't seen as expendable by his species – especially if he's unarmed. If Lester storms the building here with his gun drawn, both of you will die. So don't do that, and instead sneak around the back while he feigns surrender.

## The Thrilling Climax



Lester's been caught by a ruthless alien and battered mercilessly. The next time it hits him will be the last time he feels anything. Luckily, Buddy has shown up in the nick of time to provide some assistance, but he's only going to last so long. It's time to haul your broken bag of bones to those levers and hope for the best…

# STAR WARS EPISODE I RACER

**While deciding how to follow-up Shadows of the Empire, Jon Knoles and Eric Johnston were shown secret Lucasfilm concept art. Jon and Eric tell Rory Milne how prototype podracers inspired their memorable Star Wars racer**

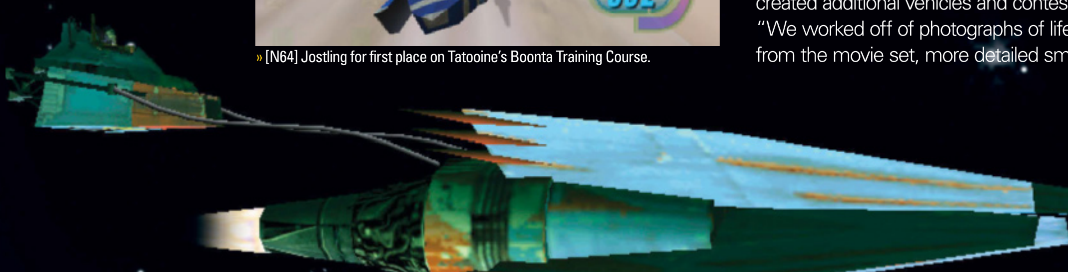
To some extent, game design is in constant flux. But the dramatic shift from sprite-based to polygonal gaming in the late Nineties required the way games were designed to be all but reinvented. Understandably, many early 3D production teams relied overly on designs proven by sprite-based gaming. And as former Lucasarts designer Jon Knoles concedes, the N64 launch title *Shadows Of The Empire* was one such example. "We learned the hard way that we tried to do too much with *Shadows*, which had several modes of gameplay. We came away from that project agreeing that next time we should do *one* thing, and do it really well. In the summer of 1997, as we were completing the PC version of *Shadows*, we were kicking around ideas for a follow-up. During this time, a few of us on the team were invited to view early concept art for the first *Star Wars* prequel up the road at Skywalker Ranch. The first time we saw sketches of the podracers, we knew there was a game to be made [out of them]. The scene was explained to us as 'the Ben Hur chariot race with jet engines instead of horses.' We thought we could make a pretty solid game out of that concept and our existing *Shadows* game engine."



» [N64] Jostling for first place on Tatooine's Boonta Training Course.

Following a decision that the project would share its release date with the forthcoming *Star Wars* prequel, Jon and his fellow project leaders were given their pick of Lucasarts specialists to help meet the strict deadline. "Three of the *Shadows* core leadership team remained together: myself, Eric Johnston, and Mark Blattel, as well as our producer Brett Tosti. We were a pretty small team by today's standards; something like 25-30 at peak. We needed people with specific skills in real-time 3D, and because we were a high-priority project that had a very hard deadline – it had to come out with the movie – we did get everyone we needed."

A wealth of production materials from the in-development *Star Wars* prequel soon proved invaluable to Jon and the other artists in his team, and as the movie's podracers and drivers evolved, Lucasarts created additional vehicles and contestants for its game. "We worked off of photographs of life-sized podracers from the movie set, more detailed smaller scale models












» [N64] A pack of competitors hurtle through the zero gravity corridors of Oovo IV 's Vengeance track.

**“We had plenty of conceptual art for the Tatooine race seen in the film, but wanted to take players on a tour of the whole galaxy”**
Jon Knoles

used as reference for CG models ILM would later build, photos of miniature sets for the film, and vehicle and character sketches from Lucasfilm's concept artists. Originally, the podracers all looked the same: each had an egg-shaped pod pulled by two massive jet airplane engines. All were driven by human pilots, the youngest of which was a teenage Anakin. We watched these concepts evolve into visually-distinct vehicles, each with unique silhouettes and colour schemes, and equally diverse alien drivers to match each vehicle. I think there were 24 podracers and drivers in the movie, and three of us at Lucasarts built all of them in various levels of detail to support the N64. We also added a couple of our own, one designed by Jim Rice, the other by Clint Young, as well as their drivers Jin Reeso and Cy Yunga – see what we did there? These were only accessible if you entered special codes.”

As well as new characters, Jon wanted his racing game to feature new worlds, which were devised with the help of noted concept artist Peter Chan. “We had plenty of conceptual art to serve as reference for the Tatooine race seen in the film, but wanted to take players on a colourful tour of the whole galaxy. We enjoyed a good deal of freedom, and invented planets purely for the game. Many *Star Wars* planets are all one thing: lava planet, ice planet, rock planet, forest moon… Well, we continued that trend, although Baroonda had a lot more variety: a little bit of Tibet, a little Dagobah, a little Mayan ruins – all on one planet.”

Beyond designing podracers, their drivers and the worlds they would race on, Jon also employed trial, error and testing in order to deliver the courses that would define his Lucasarts racing game. “Three of us designed on paper – then prototyped and built – final art for all 20-something tracks in the game. I built the Tatooine and Baroonda tracks, while Duncan Brown and Jacob Stephens designed and built the rest, with additional level art support. There was one top-down sketch of the Tatooine ‘Boonta Eve Classic’ race course provided by Lucasfilm, which I used as inspiration and reference when building that track in-game – our first test track. I attempted to build it to scale and discovered it would take nearly 15 minutes to complete a single lap – even at speeds of 400mph! That was too big for our game engine, let alone for fun gameplay. So I reduced it considerably, then widened it accordingly. A great ‘ah-ha’ moment happened when trying to recreate a big canyon jump. The testers were having a blast seeing how ▶




## IN THE KNOW

- » **PUBLISHER:** LUCASARTS
- » **DEVELOPER:** LUCASARTS
- » **RELEASED:** 1999
- » **PLATFORM:** N64, VARIOUS
- » **GENRE:** RACING



## DEVELOPER HIGHLIGHTS

**DAY OF THE TENTACLE**
**SYSTEM:** PC, VARIOUS
**YEAR:** 1993

**STAR WARS: DARK FORCES** (PICTURED)
**SYSTEM:** PC, VARIOUS
**YEAR:** 1995

**GRIM FANDANGO**
**SYSTEM:** PC, VARIOUS
**YEAR:** 1998



# CONVERSION CAPERS

**How the Lucasarts racer compares on different systems**




## N64

■ Lucasarts really pulled out all the stops when developing *Episode I Racer* for Nintendo's 64-bit console, and it's probably fair to call it the definitive version of the game. Its wealth of documented features are complemented by some great unlockables, such as extra podracers, and a dual-controller option – each pad controls an engine.

## PC

■ As well as improving on the N64's graphics, the PC *Racer* also boasts additional visual effects and cutscenes. In terms of gameplay, the PC outing has a smoother difficulty curve than its console counterpart, with slower, less aggressive competitors on the earlier courses. It also supports network multiplayer.







## GAME BOY COLOR

■ The largely Nintendo-produced GBC adaptation gets as close to the N64 title as the 8-bit handheld is capable of. This dramatically stripped-down version swaps 3D polygons for 2D top-down sprites, limits races to two contestants and ditches podracer upgrades in favour of winning your opponents' vehicles.

## DREAMCAST

■ This is easily the most attractive home version of *Racer*, the Dreamcast port faithfully recreates the N64 original but has much greater detailing in its courses and more fluid, realistically animated podracers. Dreamcast *Racer* also excels in the audio department thanks to its rousing *Episode I*-inspired soundtrack.







## ARCADE

■ The Sega/Lucasarts-developed *Star Wars Racer Arcade* is more of a remake than a conversion. Three of its four courses do take visual cues from the original game, but its fourth – an ocean planet track seeped in Sega blue – is unique to the coin-op. The arcade version of *Racer* also pits you against a countdown.



» Jon is design director at Microsoft's Turn 10 Studios which creates the popular *Forza* games for Xbox.



» Eric is a code optimisation specialist and is doing postdoctoral research in quantum engineering.

▶ far they could fly, and asked us if we could make the jumps bigger. Before you knew it, we were cutting big holes in every track and making crazy jumps."

While Jon managed the design and visuals of the *Star Wars* racer, fellow project leader – coder Eric Johnston – focused on bringing these components to life within an evolving *Shadows'* game engine, a goal Eric describes with just two words. "There was exactly one objective: go fast! Everything else was secondary, as you can tell from just looking at the vehicles – the initial prototype was a cylinder with no speed limit. It wasn't clear how it might translate into gameplay, but 'go fast' was used like punctuation in many conversations."

And because the game's hyper-fast vehicles were to be dragged forwards by massive left and right engines tethered to their 'cockpits', Eric turned dog walking into podracer simulation in order to help him work out the physics. "I lived in Half Moon Bay at the time – on the coast, south of San Francisco – and had two yellow retrievers, named Abacus and Tangent. We had two harnesses and leashes made of climbing rope, and a skateboard. Maximum speed was always achieved while travelling *toward* the beach. The cars in Half Moon Bay aren't that fast, but we were always faster. Officially, I don't recommend this!"

As Eric reconciled physics with road safety, Jon Knoles looked into broadening the gameplay of their racing game with adventure elements. "We found gameplay and graphics inspiration in games like *Beetle Adventure Racing* by *Paradigm*, *Top Gear Overdrive* and *Sega Rally*. These games felt almost like action adventure games with cars, which is more of what we felt podracing should feel like – the environment and its extreme challenges were critical to the experience."

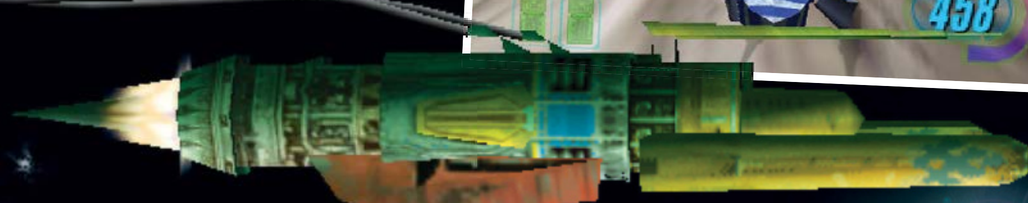
Further enhancements followed, including a fully-3D, RPG-inspired shop where race winnings could be used to buy parts to improve podracers, which Jon attributes to feature-creep. "Watto's junk shop was just a really cool, well-developed set-piece to add depth using RPG-light mechanics. Funny thing is, we had no intention of using a fully-interactive 3D interface until pretty far into development. I'm really glad we did that. It was much more immersive and fun between races."

In terms of the racer's in-game power-ups, Jon looked to Lucasfilm's *Star Wars* prequel for inspiration,




» [N64] *Episode I: Racer* used the Expansion Pak to either increase the resolution in hi-res mode or improve the frame-rate in lo-res mode.










» [N64] Anakin Skywalker loses control on the icy track of Beedo's Wild Ride, located on Ando Prime.

which resulted in constant access to speed-boosts at the risk of blowing up podracers. "As odd as it sounds, we didn't like the idea of peppering the course with floating power-ups. We wanted to be as authentic to the film as we could, even given the graphical limitations of the N64. We did agree there had to be a recharge mechanic for using the boost – or you'd just use it all the time, but because Anakin's mechanical repair skills were a big part of the race scene, we wanted to play around with that idea of pushing your vehicle beyond its limits, then being able to fix it on the fly."

In addition to influencing podracer power-ups, Lucasfilm's prequel movie – *Star Wars: Episode I* – also lent its name to Lucasarts' racing game, although Jon and his team didn't quite get the title they had hoped for. "The game was going to be called *Star Wars: Episode I Podracer*. Unfortunately, there was another sci-fi racing game at the time called *Planet Of Death* – or simply *POD*, in North America – published by Ubisoft. They trademarked the word 'pod' in any form of interactive entertainment. We were not allowed to use a title for any game with the word 'pod' in it. Ultimately we settled on *Star Wars: Episode I Racer* because it was short and to the point."

With its name decided, *Star Wars: Episode I Racer* launched to critical acclaim, which Jon attributes to the game's high tempo. "Critics generally liked the game, even if they thought it was too simple or limited in scope for their expectations of a *Star Wars* game. I do think our focus on eye-peeling speed led to a more focused and polished game – that didn't go unnoticed."

And if anything, *Episode I Racer* was a greater commercial than critical success, beating the competition to become the world's bestselling sci-fi racing game, although Eric Johnston recalls having nothing but respect for rival racers. "We loved *F-Zero* and *WipEout*. Dev teams were small then, and playing someone else's game was like having a conversation with the developers. You got to see how they solved problems you gave up on."

> **"There was exactly one objective: go fast! Everything else was secondary, as you can tell from just looking at the vehicles"**
> Eric Johnston

When asked for his thoughts on his *Star Wars* racing game now, Eric expresses nostalgia for *Racer*'s development environment and pride at having cocreated the game. "*Racer* was written at a special time. The source code and dev teams were small but about to start growing. It was received by audiences thrilled to punch the gas and enjoy some improbable vehicular shenanigans. I'm proud to have been part of that."

Jon Knoles' last words on the racer explain the paradox of the game making concessions to speed and yet also securing much of its enduring appeal thanks to its high velocity. "At speeds of 400+ miles per hour, it is difficult to emulate the type of door-to-door action people expect from a great racing game. So we focused on delivering the fantasy fulfilment of speeding through alien landscapes. I think that sense of speed and track challenge, and strategic use of the boost mechanic, all added up to a fun game. Of all the movie-based games I've worked on, this was one of the high points." *

**Many thanks to Jon Knoles and Eric Johnston for racing back to *Episode I*.**




### STAR WARS EPISODE I: RACER 101

■ Taking *Episode I*'s Tatooine-set podracing scene as its starting point, *Racer* spans eight varied planets hosting 25 courses – ranging from easy to expert. *Racer* adds strategy by allowing winnings to be spent on upgrades and by letting players boost their speed at will within the limits of their highly volatile engines.

## CONTROL FREAK

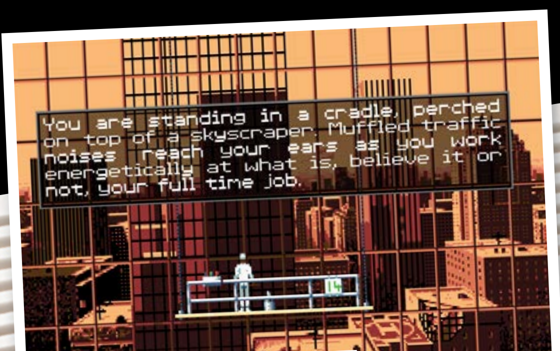
### Dual-throttle podracing using the N64's second controller

**Those that paid close attention to the podracing scene in *Episode I* will have noticed Anakin Skywalker and his rivals using a dual-throttle system to control their vehicles, where a left lever fired the left engine and a right lever powered the right engine. When it came to adapting podracing as a game for home systems, though, a simplified left/right to steer, single-button accelerator system was favoured. However, if you enter a special code into the N64 version and plug in a second controller then the analogue sticks on the pads control one engine each, just like in the movie. The proviso is, of course, that controlling the game with a controller in each hand is tricky to say the least, and on top of that, two-stick control feels counter-intuitive at best. With that said, Lucasarts deserves full credit for the excellent fan service that the N64 *Racer*'s dual-throttle mode provides.**



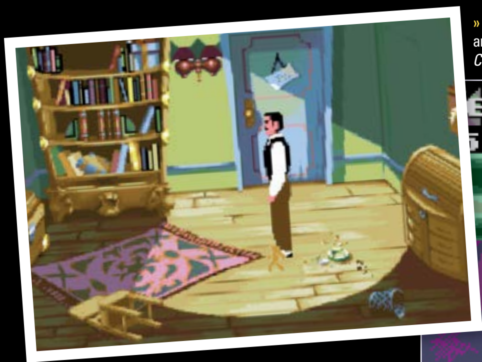

# Delphine Software INTERNATIONAL

**When Delphine's developers walked into their office, they trod the red carpet – so it's little wonder they ended up making a host of cinematic games. David Crookes flashes back over the history of this renowned French developer**




» [Amiga] *Future Wars* incorporated the kinds of descriptions usually found in traditional text adventures.





» [Amiga] With rotoscoped animation and a whodunnit plot, *Cruise For A Corpse* used many French references.




» [Atari ST] *Bio Challenge* was one of the first Delphine games to appear on the ST.




**When discussing Delphine Software, it is impossible to separate it from the work of a single man.** For without the strong talents of programmer Paul Cuisset, it is unlikely the company would even have got off the ground.

DSI's founder – Paul De Senneville – was not a gamer. As a highly-successful composer who has worked with some of France's most accomplished artists including the bestselling pianist Richard Clayderman, De Senneville had merely been persuaded to embrace an opportunity.

Yet his hands-off approach to what was effectively a subsidiary to the group that included record company, Delphine Productions, was one of the reasons it flourished. Cuisset was given free reign to work on whatever he wanted.

"We were really free because Paul was a composer of music and he treated us as composers," says Cuisset. "We were free to do the game that we wanted to do and I had complete freedom to make the choice of technology and platform. We would experiment and try many new things. Of course, we were quite successful so that was something in our favour."

Cuisset discovered videogames when he began working with computers as a student in 1981. He would play Apple II games in the computer room at the University Institute Of Technology and he moved from a ZX81 to a C64 and an Oric Atmos in a short space of time. He enjoyed playing the likes of *Lode Runner* and *Elite* "but I only started to do something with computers and think about game projects when I finally discovered the Atari ST".



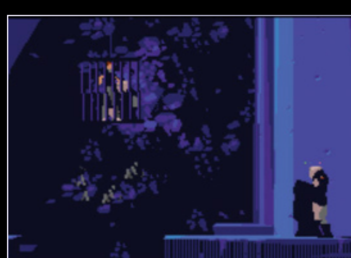



» [Amiga] Delphine liked to add cutscenes in an attempt to make its games feel like interactive movies.

> **"We were really free because Paul was a composer of music and he treated us as composers"**
> Paul Cuisset

Cuisset's first game for Atari's 16-bit computer was a simple, first-person vector wireframe 3D space trader called *Phoenix* that was written in 1987 with his programming partner and friend, Patrick Guillemet. Published by ERE Informatique, it demanded fast actions in order to keep up with its blistering pace. The following year Cuisset met the graphic artist Michael Sportouch and coder Denis Mercier. They made a *Breakout*-style game published by The Edge called *Tonic Tile* and they worked on an Atari ST conversion of *Space Harrier* for Elite Systems.

But it was the musical tie-up on *Tonic Tile* which had been an important step for the team's future. Jean Baudlot, one of De Senneville's musician friends who had composed music for various labels including Polydor and Delphine Records, had become a massive fan of computer music. He knew Michael which led him to the door of Cuisset and Denis. When he learned the pair were working on



» [Mega Drive] *Another World* put the player in very inventive situations and it was a true labour of love.



» [Atari ST] The idea of *Castle Warrior* was to move left and right while attacking the enemy.

a new game, he offered to write the music and said De Senneville had agreed that Delphine would publish it. Delphine Software International was born in 1988.

*Bio Challenge* became its first game – an impressive six-level, side-scrolling, strategic non-shooter featuring an android seeking four pieces of an amulet. With its four-layer parallax scrolling and 160-colour palette it was not only challenging but also technically impressive.

Cuisset produced the game and he signed up to create a second. "Denis was only 17 years old and he had to go to school and study," he says. "And that is how I met Éric Chahi." By 1989, Éric had been programming the likes of the Amstrad CPC, Oric Atmos, Atari ST and Amiga for six years on behalf of Loriciels. But he left the company to produce the graphics for Cuisset's new game, *Les Voyageurs Du Temps: La Menace*. "It was an adventure game that took us one year to make," Cuisset, says of the title that became known as *Future Wars* in the UK and US.

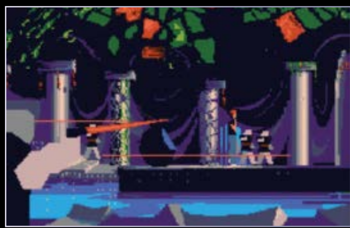
## INSTANT EXPERT

- Paul De Senneville's first daughter was called Delphine.
- Formed in 1988, Delphine Software International was a subsidiary of record company Delphine Productions.
- DSI was based in Paris, located near the Champs-Elysées.
- Monaco's Eurovision entry in 1978 was De Senneville's composition, *Les Jardins De Monaco*.
- DSI's key developers Paul Cuisset and Éric Chahi love sci-fi.
- Paul Cuisset was initially unsure about Éric Chahi's work – Éric spent three weeks producing pictures to impress him.
- The pair had a penchant for producing cinematic games with cutscenes.
- An Atari ST devotee, Cuisset was working as an analyst and programmer when he made his debut, *Phoenix*.
- Cuisset had a hand in the vast majority of Delphine's games.
- Éric was inspired to use polygonal technology by *Dragon's Lair*.
- *Another World* sold a million copies.
- *Flashback* sold 1.25 million copies – the most of any French game at the time.
- The Delphine Group created another gaming company called Adeline Software International in 1993.
- Named after De Senneville's newborn baby, Adeline was separate to DSI with Frédérick Raynal as creative director.




# DEFINING GAMES

## ANOTHER WORLD



■ Stranded in a barren landscape strewn with danger, players of *Another World* controlled nuclear scientist Lester Chaykin in an intense battle for survival. It wasn't an easy game, but this blue-tinged, smoothly-animated blockbuster oozed atmosphere and flowed like a film. Whether it was the polygonal graphics, immense sound samples or difficult puzzles, once you started this scrumptious action-oriented sci-fi gem up, it proved immensely difficult to escape from.

## BIO CHALLENGE



■ This may have been the first DSI game from Paul Cuisset, but he showed he was no rookie with this critically-acclaimed 2D platform game which starred a human-saving cyborg called KLIPT. The idea was to collect sections of an amulet within a set time, teleport from planet to planet and bag enough energy to defeat the Guardian. It was pleasantly original and it also benefited from a energetic French-sounding score from Jean Baudlot.

## FLASHBACK: THE QUEST FOR IDENTITY



■ Assuming the role of Conrad B. Hart, this was another of Delphine's complex narrative-led 2D platformers set in the future. Like *Another World*, it had Delphine's familiar cinematics but it also excelled in terms of its spectacular human-like animation and a fantastic plot. Each of the seven levels en route to Earth had devious puzzles, pixel-perfect jumping, fast-paced action and an atmospheric blend of music and sound effects.

## FADE TO BLACK



■ As the sequel to *Flashback*, albeit in 3D, it was no surprise to see Conrad B. Hart enjoying a good level of in-game freedom in an intelligent puzzle adventure that had different endings, depending on the decisions made during play. Although the over-the-shoulder viewpoint of the motion-captured characters was marred by a problematic camera and ropey controls, fans of the original would have been more struck by the lack of platforms since the action took place on a single level.

## MOTO RACER



■ Anyone who had been watching the output of Delphine for close to a decade would have been shocked to see that it had suddenly decided to speed down another path. But *Moto Racer* enjoyed Cuisset's blistering 3D engine and it proved to be a standout motorcycle game. Spawning a long-running franchise which dominated Delphine's output thereafter, the racer offered six initial courses and three unlockable ones, all of which could be enjoyed over two to four laps.



» [Mega Drive] There are some gamers out there who still believe *Flashback* is *Another World*'s sequel.

> **"Paul De Senneville trusted us, which is rare in the industry. It was an atypical company"**
> Éric Chahi

▶ Inspired by text adventures such as *The Hobbit* and the graphical equivalents by Sierra, Cuisset wanted to infuse the genre with a full graphical interface and head-turning visuals. It introduced the first version of the adventure game engine *Cinematique* which was used in a modified form for one of Cuisset's later games, *Operation Stealth*. It also benefited from Baudlot's musical talents.

"*Future Wars* was quite successful, so Paul De Senneville proposed for me to join the team at Delphine," says Cuisset. "They had an inside team of three or four people who were working on *Castle Warrior* and I joined as the creative director." Based in Paris, Éric tells us the office had a "red carpet at the entrance, gold discs everywhere and many eccentric, contemporary art pieces".

DSI was being driven by a very hands-on Cuisset. "The teams were small," he says. "We only had four people working on *Operation Stealth* and so I was really involved in the company. I was in charge of designing the titles and I was the lead programmer. We grew over time but we had a lot of freedom."

Éric says it made for a great working environment. "Working at Delphine was a dream," he says. "They were very respectful of the authorship and the creative choice of the creator. Paul De Senneville trusted us which is rare in the industry. It was an atypical company."

It meant the development team could get on and use its instinct. "We made the *Future Worlds* engine more innovative for *Operation Stealth* and we didn't have to create documents or explanations for why any of the games would sell," says Cuisset.

While Cuisset threw himself into his in-house work, Éric remained freelance. In 1991 the team worked on *Cruise For A Corpse* which was published in the UK by US Gold. Éric went off to create the cinematic adventure *Another World*, which sold a million copies. "I was able to try some rotoscoping techniques and used myself as the main character," Éric says. "I also used polygons so that I could produce larger graphics."

It was a labour of love for Éric but he admitted it put him under some strain as games journalists flocked to talk to him



» [PC] Huge numbers of developers made *Moto Racer* and its sequels – this is the second game in the series.

## WHERE ARE THEY NOW



### PAUL CUISSET

■ After leaving DSI in 2003, Paul Cuisset had intended to take some time away from videogaming but the lure proved too much and he soon returned. In 2005, he formed VectorCell which produced games such as the Nintendo DS adventure *Mister Slime* and the poorly-received survival horror, *Amy*. An unsuccessful *Flashback* remake helped put VectorCell into liquidation but Cuisset is currently working successfully with Microïds.



### ÉRIC CHAHI

■ When Éric left Delphine, he set up Amazing Studios and worked on a cinematic platformer called *Heart Of Darkness* in 1992 that entered a period of development hell. It saw the light of day in 1998 but missed the boat in so many respects: versions for the 3DO and the Sega Saturn had to be canned because the consoles flopped. In 2010 *From Dust* emerged at E3 and heralded his full return to gaming. He's currently working on a brand new project.



### GEOFF BROWN

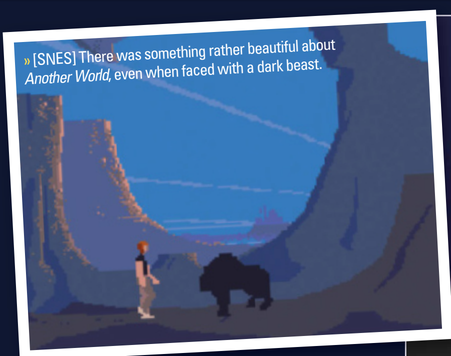
■ After leaving the videogaming industry – with the likes of his previous firms, US Gold and CentreSoft Distribution, behind him – Geoff Brown decided to move away from the United Kingdom, although he took a business interest in a small West Midlands gaming studio called Pixelflip. He set up home in California and pursued his interest in music production. He is currently residing in Mexico.

### PAUL DE SENNEVILLE

■ Delphine's founder continued with his music interests and he still works today as a composer and producer. Delphine lives on as a varied company today with 15 different subsidiaries that range from a large casting agency to a clip production firm. Delphine claims that it is one of the leading French music exporters to the world market and the only one that is specialising in instrumental music.

### JOHN BAUDLOT

■ His gaming credits had included *Operation Stealth*, *Future Wars*, *Ivanhoe*, *Cruise For A Corpse*, *Flashback* and *GT Racing 97* but he departed from the videogaming industry and went on to form his own advertising and jingles company in 1995 called L'Ours-son Production and most recently he was producing music for French documentaries including *Ils Ont Filmé La Guerre En Couleur* (*They Filmed The War In Colour*).



» [SNES] There was something rather beautiful about *Another World*, even when faced with a dark beast.



» [Mega Drive] *Another World*'s cutscenes are superb, even with a complete lack of speech or subtitles.



and developers sought to collaborate on new titles. Delphine was impressed by what he had done, though. "He wanted to make a game on his own," explains Cuisset. "When he finished it, he came to show it to us and we were amazed. It was very special."

The next big game for Delphine was *Flashback* and, as before, the company put its full weight behind it. Delphine would work on one game at a time. "We did not have the energy to do more than one – spending so much time working night and day, it was impossible to do something else," explains Cuisset. There was great determination and the team felt that it could move mountains. "We felt anything was possible," Cuisset continues. "We worked 15 to 20 hours a day, sleeping some nights in the office, and we considered that to be normal. But it would explain the success we had at that time."

*Flashback* came as a result of the influence of publisher US Gold which had just secured the licence to *The Godfather*. Instead of making a straight film-to-game title, Cuisset decided it would be better to set the story far into the future but US Gold wasn't sure. Rather than scrap the game and start from scratch, though, Cuisset felt it would still work as a game in its own right and so the development team made the necessary tweaks, abandoned all ties with *The Godfather* and produced something different.

"It was so far removed from the original story and the original mood of the movie that it would not fit," recalls Cuisset. The game still had Delphine's hallmark cinematics and it also including *Prince Of Persia*-like rotoscoping. And it went down a storm. *Flashback* ended up being ported from the Amiga to DOS, the Mega Drive, SNES and Acorn Archimedes before finding itself on many other systems.

"I loved the game," says Geoff Brown, boss of US Gold. "I saw this game that had slick rotoscoping animation which reminded me a lot of *Impossible Mission*," he says. "It had a flick screen rather than scrolling which was a retro step at the time. I liked it a lot and I offered a 50-50 deal to publish it."

Geoff says he kept in contact with Delphine, coming up with the ▶

## A SHAQ FU SEQUEL?

*Shaq Fu* was made in 1994 and it was widely considered to be one of the worst games ever made. One to be filed away and forgotten about, you may think. But no, if you go to shaqfu.com today you will find a tongue-in-cheek website encouraging players to track down copies of this much-loathed game so that they can be destroyed.

What's more intriguing is the site is also against any sequel being made. Fair enough, 'That's unlikely,' you may think even though one had been considered by Delphine at the time and quickly shelved. But, again: no. An Indiegogo campaign to produce *Shaq Fu: A Legend Reborn* attracted $458,885 of backers' cash. "This time we won't FU it up!" the tagline says.

Made by Saber Interactive, you can see the trailer at youtu.be/apLitkjjXlo. The developers promise it will be a "slick, fun, rock-solid game" and it will be made available on the PC, PS4, Wii U, PS3, Xbox One and Xbox 360.




# TIMELINE

1988 ■ Delphine Software International is created by Paul De Senneville.

1989 ■ It commissions Paul Cuisset's *Bio Challenge* and has an in-house team producing *Castle Warrior.*

■ Earmarked as a series, adventure game *Les Voyageurs Du Temps: La Menace*, or *Future Wars*, is released.

1990 ■ *Operation Stealth* is launched. It is called *James Bond 007: The Stealth Affair* in the US.

1991 ■ Platformer *Another World* astonishes Amiga and Atari ST owners.

■ Whodunnit *Cruise For A Corpse* launches with elements of Hercule Poirot novels and *Tintin*

1992 ■ *Flashback: The Quest for Identity* becomes DSI's biggest ever seller.

1993 ■ Adeline Software International is formed by Delphine and makes *Little Big Adventure.*

1994 ■ One of the worst games of all time, *Shaq Fu*, is published by EA.

1995 ■ *Fade To Black, Flashback*'s 3D sequel, launches on PC and PlayStation.

1997 ■ Delphine takes tentative steps into a genre with its first motorcycle racing game, *Moto Racer.*

1998 ■ *Moto Racer 2* is published by EA, continuing the franchise.

1999 ■ Cuisset unveils *Darkstone: Evil Reigns.*

2000 ■ *Moto Racer World Tour* adds an array of handling techniques.

2001 ■ North American rights to *Moto Racer 3* are bought by Infogrames.

2002 ■ Developed mainly by Adeline Software, with some input from DSI, *Moto Racer Advance* is released for the Game Boy Advance.

2003 ■ DSI is sold to Doki Denki in February.

2004 ■ Doki Denki goes bust. Éric Chahi buys back the rights to *Another World.*

name of both the game and lead character – "they loved it" – and he also insisted to his own board that US Gold put the game out on 16MB SNES cartridges. "They cost about $17, and 100,000 cartridges would cost $1.7 million," he says. "It was a gamble but I thought it would be worth it. And it was."

But the move to consoles hadn't been easy. "Technically it was quite different," Cuisset says. "We had performance issues and consoles were more Japanese, so the processes were new for us and we had to learn quickly. We had to consider the mapping of the control and the different ways of playing games. We used to manage games on floppy disc and maximise the switching of the floppies, but having all the code on one cartridge was something we had to work with. It was easier because we could produce one code for all machines which wasn't like on the PC where the hardware was so different."

Although Delphine had been gaining a reputation for cinematic adventure games, its next big move raised many eyebrows. The developer produced the 2D fighting game *Shaq Fu* for the Mega Drive and SNES in 1994, based upon the basketball player Shaquille O'Neal. It represented a time of great change for Delphine as it took on many more staff members – there were 20 graphic artists and three assistant producers for that game alone. Cuisset was the project manager and design lead, overseeing four programmers. But unlike its previous games, it wasn't taking a gamble in

> **"We had performance issues and consoles were more Japanese, so the processes were new for us"**
> Paul Cuisset

producing a title it thought players would like. It was producing a game to order.

"EA had approached us and it proposed that we work on this game," says Cuisset. "We were very proud of this. But they wanted a fighting game and [that] was not our spirit."

*Shaq Fu* proved to be a terrible move. Cuisset said the team did not know much about Shaquille O'Neal and his personality. "We wanted to have the best animation possible because we had the experience doing them with *Flashback*," defends Cuisset. "But they also wanted big sprites and something more like a *Street Fighter* kind of game. It was a difficult project. EA had put a lot of money into it and they had paid for TV commercials so it wasn't possible to be late with the game. It didn't help that the timescale was short, about a year, and it was complex because we had to hire actors for rotoscoping."

Delphine redeemed itself in creating the much-awaited sequel to *Flashback, Fade To Black*, for the PlayStation and DOS in 1995. The game was produced at the same time as *Shaq Fu* with the company's staff having been split in two. Cuisset laments: "I would have preferred to work on *Fade To Black* from the start but I joined later as the director and level designer on the game once *Shaq Fu* had been completed.

"I redesigned part of the game but it was advanced by then because the engine had already been created," he says. "The idea was to produce a 3D *Flashback* but we had a limitation at that time. We didn't have the ability for the character to go up and down, so all of the game was on one floor."

This was the most difficult period for Delphine as it struggled with the move to 32-bit console gaming and the expectation that came with it. "We had to face a lot of technical issues," Cuisset says. "At the time, 3D games were new and we didn't have a reference on how to control the cameras and the characters and the environment, so that took us a lot of time to solve."



» [GBA] *Moto Racer* was given a spin on the GBA with the series becoming DSI's longest-running franchise.



» [Mac] DSI's sister studio, Adeline Software International, created the brilliant *Little Big Adventure.*



» [Mega Drive] Flashback was a huge success for Delphine, appearing on a number of different systems. We'll keep quiet about the HD update, mind.

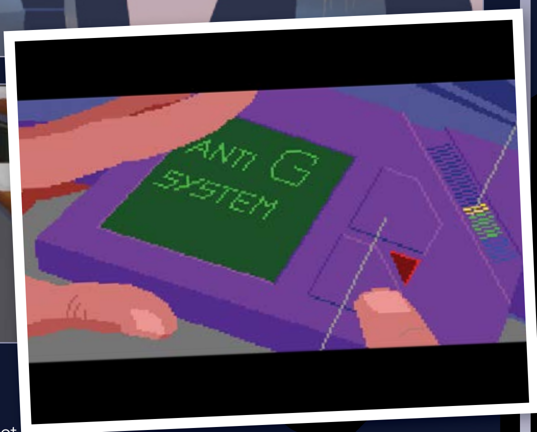




» [Xbox One] *Another World* has had several updates. This Xbox One version was for the 20th anniversary.



» [PlayStation] *Fade To Black* was the sequel to *Flashback* and didn't impress like its predecessor did.




» [Mega Drive] The cutscenes used in *Flashback* were incredibly stylish.

With *Fade To Black* released, Cuisset began to head up a team that would work on an RPG called *Darkstone: Evil Reign,* but he also worked on the engine of a small racing game. He showed it to his team which lapped it up, and so DSI began work on *Moto Racer,* which was released in 1997. "We had never done that kind of game before but it was fun," Cuisset says. It felt fresh, mixing dirt and street backs and featuring eight tracks and multiplayer. Cuisset had stopped working on *Darkstone* during this time but he returned to it a year later.

By this point, Delphine had around 180 staff. It had retained its talent following *Shaq Fu* but that had repercussions for development. "It was too much for me," Cuisset says. "I like to do games where I can make quick decisions but having big teams is complex and it's hard." For *Darkstone,* a team of four people, including Cuisset, was formed and they worked from home, meeting at Delphine on Tuesdays to show their game's progress. It took 14 months to complete.

But Cuisset wasn't finding life at the company fun. The size of the company meant he was working to milestones and having to organise people. What's more, working from home had damaged his relationship with those working in the office. "I felt like a stranger," he says. "I was working at home and there were people at the company who didn't class me as working there."

DSI produced *Moto Racer World Tour* in 2000, *Moto Racer 3* in 2001 and *Moto Racer Advance* in 2002 and it was clear that it was only looking to produce more games in the series. Cuisset left in 2003, the same year the DSI was sold to Doki Denki. The following year, Doki Denki closed. "It was Paul De Senneville's decision to sell" Cuisset says. "He wanted to go back to his music and I felt the company had lost its personality."

Cuisset had no desire to flashback to better times and instead wanted to cut his loses. But in the 16 years that Delphine had existed, it proved that it had a flair for innovation and for creating memorable games. "We had the sense we were pioneers in the field and we were lucky to have been around for the people we worked with," Cuisset says. "Today, it's more difficult to have something fresh. It's another world." ★

# THE DNA OF DELPHINE SOFTWARE INTERNATIONAL

## FAITH IN AUTEURS

■ DSI was committed to giving its key developers full control over the games that they wanted to make. It had particular faith in the talents of its creative director Paul Cuisset and the game designer Éric Chahi, both developers delivered on blockbusters such as *Flashback* and *Another World.*



## SCIENCE FICTION

■ Paul Cuisset and Éric Chahi are huge fans of science fiction and this was seen in *Bio Challenge,* which was set in the distant future, the time-traveling adventure *Future Wars*, the alien landscape of *Another World* and the galactic tales of *Flashback* and *Fade To Black.*



## ACTION-ADVENTURE GAMES

■ The developer was particularly successful in producing action-adventure games that were packed with puzzles, driven by captivating storylines and infused with cinematic cutscenes – a department at Delphine Software International, created by Paul Cuisset, was devoted to creating them.




## TECHNICAL EXCELLENCE

■ Whether it was using rotoscoping animation techniques, characters using gestures and facial features to communicate, or some tricky stippling to boost the number of colours on the screen, Delphine – like many French developers at the time – loved to showcase its technical prowess.



## MUSIC

■ The overall Delphine group had been built upon music – Paul De Senneville was an accomplished composer – so it was inevitable much effort went into gaming soundtracks, from Jean-Michel Jarre-style tunes to logo-accompanying music that wouldn't have been out of place in a Hollywood movie.




## RACING GAMES

■ From 1997 until its collapse in 2004, Delphine was very much a racing game developer, dedicated almost entirely to the *Moto Racer* franchise of motorcycle titles. Incidentally, the French videogame scene shrunk significantly after this period, showing Delphine had been in the right place at the right time.



# Future Classic

**Modern games you'll still be playing in years to come**

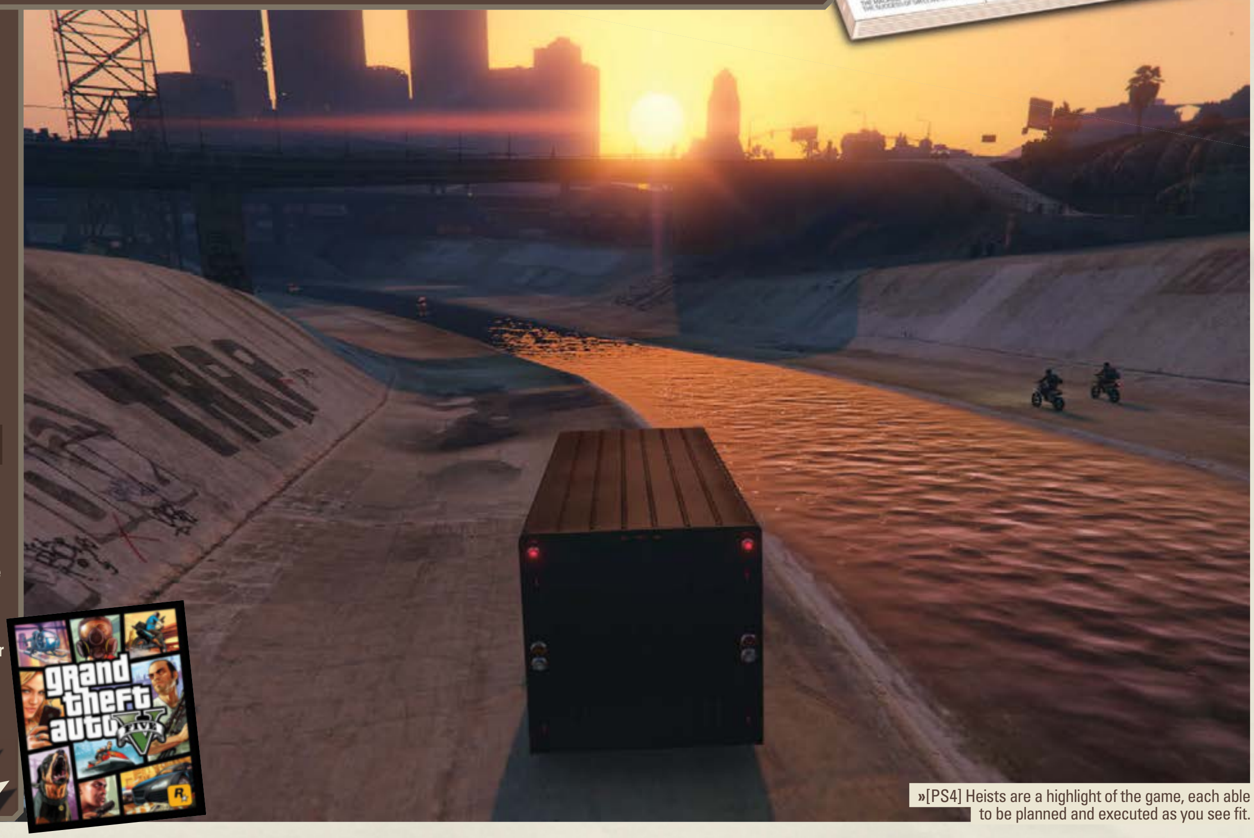



### INFO

- **Featured System:** PS4
- **Year:** 2014
- **Developer:** Rockstar Games
- **Key People:** Leslie Benzies (producer), Imran Sarwar (co-producer, game designer), Sam Houser (executive producer), Dan Houser, Rupert Humphries (writers)

### GO DEEPER

- ***GTA V* is the fastest-selling entertainment product ever, grossing over $1 billion in less than 72 hours. Lifetime sales of the game exceeds 65 million.**
- **The soundtrack is one of the broadest ever to appear in a game, with some 240 licensed tracks across 18 fictional stations.**



»[PS4] Heists are a highlight of the game, each able to be planned and executed as you see fit.

# 56. GRAND THEFT AUTO V

**It's one of the biggest games on the planet for a reason, and the latest release is the best yet. Luke Albigés returns to Los Santos to discover that crime does pay, and in a very big way indeed**

### THE BACKGROUND

Given *Grand Theft Auto III*'s status as the game that defined the modern open world setting, every new release that has followed has been met with an odd mix of intense scrutiny and insane hyperbole – each new game has been lauded as The Best Thing Ever until a few years later, when improvements to the next outing highlight the weaker areas of the last. But in this era of remaster culture, *GTA V* managed to dodge the usual fate of being usurped by the next game in line in a unique manner. It replaced itself. The original PS3 and Xbox 360 releases were excellent, but it was plain to see that the aging hardware wasn't having a nice time running the game – frame-rates chugged, textures struggled and it could end up feeling sluggish at times as a result. But the timing was right for Rockstar and with the new consoles having just turned up on the scene, it wasn't long before *GTA V* was winging its way to PS4 and Xbox One. The PC version and its myriad mods make it the definitive version for enthusiasts, but the console versions had finally (almost) caught up at last.

### THE GAME

We've come to discover over the years that games like *GTA* are incredibly hard to accurately review. If platforming in a *Mario* or *Sonic* game is bad, it's heading for a poor score; if handling in *Gran Turismo* or *Dirt* isn't up to scratch, it won't do well; poor gunplay in games like *COD* or *Doom* would cost them dearly. Most games have focus, one clear pillar that the experience would crumble without. Rockstar's series has no such focus. It attempts to do *everything*, from tight vehicle handling to free exploration of a huge city and surrounding area, from cover-shooter gunplay to aerial stunts, from structured solo story to personal online world and characters. That it should falter in a few of these areas is inevitable – even those dedicated games we mentioned before don't get it right every time – but what's incredible is not only the generally high standard of each of these components,



»[PS4] There's no such thing as a nice day out at the beach when these maniacs are involved…



»[PS4] Building on the already great PS3 version, the current-gen release makes the city even busier.




»[PS4] It's fun to let loose and go on the odd rampage, but this will pretty much always be what you see in the end.

## Things of note

**GTA ONLINE**

A online game with new missions, UGC, heists comes packaged with the game. It's superb, although its relevance is debatable given that it won't stay live forever…



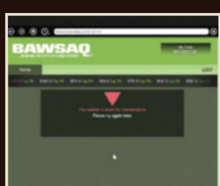
**THE TORTURE SCENE**

This made headlines around launch, although primarily for outlets who are constantly looking for the next thing to be outraged about.



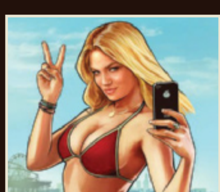
**TRADING STANDARDS**

So rich is the game's world that it not only features its own expansive version of the internet but it even has a working stock market.



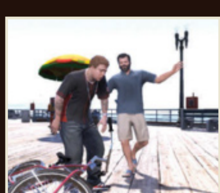

**STARLETS IN THEIR EYES**

A case between actress Lindsay Lohan and Rockstar is ongoing to this day. Lohan claims her likeness was used without consent.



**LET'S (NOT) GO BOWLING**

Unlike in *GTA IV*, optional activities are kept almost entirely optional here. Yoga makes a brief appearance in a story mission, mind.



> **"From a narrative perspective, GTA V is Rockstar's most ambitious title to date"**

but the manner in which they're seamlessly presented as a single product that teases near-limitless freedom with its tools and more or less delivers.

Rockstar's tongue-in-cheek portrayals of the land of opportunity have a history of coming good on that promise, but *GTA V* is the new benchmark. The city is huge, bustling with life and so packed with minute detail that you could play more or less forever and still be seeing new things fairly regularly. The random nature of it all is just part of the emergent gameplay scene that its granddad introduced, and it's been taken to the next level – crash your car into a phone box and you never know whether you'll see a gang of youngsters bust out their phones to snap a video of the accident, a furious vigilante running your way, a mass exodus from the scene, nearby police officers or ambulance crews rushing to the scene or something else entirely. This only serves to make experimentation even more of a joy, distracting from the task at hand as it has always done but in the best way possible. There's so much you *could* try out in this digital playground that even though much of it comes with no real reward other than the satisfaction of just simply doing it (we imagine those guys who have landed their dirtbikes on top of jumbo jets that are in mid-fllight must feel pretty good about it), that's usually reward enough.



»[PS4] A lot of Trevor's behaviour is what you might call 'colourful'. A strong stomach is required at times.

From a narrative perspective, *GTA V* is Rockstar's most ambitious title to date. Offering three playable characters is a simple yet effective mechanic to add to both story missions (where frequent switching is encouraged, where possible) and open world playtime, where changing viewpoint will blast you across the map and into whatever predicament or bizarre scenario they may find themselves in. The characters themselves are arguably the weakest part – 'retired' crook Michael's broken family is just a retread of the 'money can't buy happiness' parable we've all heard a million times, Franklin's hood-based car-boosting antics are equally played out and Trevor, while the highlight, is still just a one-dimensional lunatic at the end of the day. Then again, offering a satirical take on typical stories, settings and stereotypes is sort of Rockstar's main play with the series, so you do have to wonder how much of that familiar feeling is absolutely intentional…

### WHY IT'S A FUTURE CLASSIC

The simple truth is that modern games that have defined genres typically don't lose their crowns. *Mario 64* perfected the 3D platformer and whether you pick *Galaxy*, *3D World* or the original, he's still the boss. *Call Of Duty*, similarly, laid the template for the modern online shooter and is still the one to beat, while *Final Fantasy*, even after a trilogy that apparently everyone hated (we didn't, for the record), remains the biggest global player in the JRPG scene. As such, *GTA V* isn't going anywhere, and we're fine with that. Upstarts like *Saints Row*, *Crackdown* and *inFamous* might bring novelty and super powers to the table, but it's just no match for a game so intricately designed. Across other media, popularity and quality can feel like they're mutually exclusive at times. But in gaming – *Assassin's Creed* aside – there's a much clearer and more tangible correlation between the two. *

# SUPER SMA



**Where else do you get to see Luigi take revenge on Mario after years of living in his shadow, or see Captain Falcon fighting for his life against a horde of Yoshis? Luke Albigés wave-dashes back to the party fighter that evolved into a tournament sensation**




» [N64] It's fun to charge in and bust out your best moves, but it makes more tactical sense to hold back and let others wear themselves out.

# ASH BROS.



**The core concept of *Smash Bros.* is pretty much as old as time itself.** It's the classic power struggle; it's 'my dad is bigger than yours'; it's those playground arguments about who would win in a fight between Batman and Lion-O. But more than that, it's a celebration – proof if proof be needed that Nintendo's family of familiar faces is the best in the business. Today one of the most popular competitive fighting games in the world (player count across *Melee* and the new game at Evo 2016, the world's leading fighting game tourney, fell only just shy of front-runner *Street Fighter V*), it's amazing to return to *Smash*'s humble beginnings and remember just how barebones the experience used to be.

Fire up the Wii U game and you're greeted with an daunting amount of choice. From packed menus that seem to go on forever to a character select screen that only gets even more ridiculous as you add to its vast selection of fighters through general play, you never feel like you've seen everything the game has to offer. That cannot be said of the original game, with its eight core fighters and limited modes, but the comparison is hardly fair – this is a pattern seen consistently throughout the history of the genre. *Street Fighter*'s roster of playable characters has swelled from eight in *Street Fighter II* to 44 in *Ultra Sreet Fighter IV*, *X-Men Vs. Street Fighter* had just 17 to *Marvel Vs Capcom 2*'s 56, *Mortal Kombat* had only seven characters on its inception… in comparison, *Smash*'s cast of 12 fighters (four of whom are locked until certain criteria are met) looks positively healthy.

Better yet, there's very little fat on the roster. With the exception of Luigi (who, as you might expect, ▶

# THE SEQUELS ...and the characters that joined the fray



## SUPER SMASH BROS. MELEE

GAMECUBE, 2001

■ Widely regarded as the best game in the series and still played competitively to this day, *Melee* more than doubled the character count and went to town with new modes, options, stages and references. Refined controls led to some complex techniques that make high-level play incredible to watch – anyone who considers *Smash* to be a button-mashing party game would do well to check out some pro matches to see the *real Smash* in action.

### NEWCOMERS

**Bowser** [Mario]
**Dr. Mario** [Mario]
**Falco** [Star Fox]
**Ganondorf** [Zelda]
**Ice Climbers** [Ice Climbers]
**Marth** [Fire Emblem]
**Mewtwo** [Pokémon]
**Mr. Game And Watch** [Game And Watch]
**Peach** [Mario]
**Pichu** [Pokémon]
**Roy** [Fire Emblem]
**Sheik** [Zelda]
**Young Link** [Zelda]
**Zelda** [Zelda]



## SUPER SMASH BROS. BRAWL

WII, 2008

■ As well as another massive serving of cool new content, *Brawl* also brought with it *Smash*'s most controversial feature to date. Tripping, where characters had a slight chance of falling over when initiating a dash, added an unnecessary random element into what was proving to be an increasingly technical game, and most competitive circles ended up sticking with *Melee* instead of risking losing high-profile matches after pratfalling.

### NEWCOMERS

**Diddy Kong** [Donkey Kong]
**Ike** [Fire Emblem]
**King Dedede** [Kirby]
**Lucario** [Pokémon]
**Lucas** [Mother]
**Meta Knight** [Kirby]
**Olimar** [Pikmin]
**Pit** [Kid Icarus]
**Pokémon Trainer** [Pokémon]
**R.O.B.** [Nintendo]
**Snake** [Metal Gear]
**Sonic** [Sonic]
**Toon Link** [Zelda]
**Wario** [Mario]
**Wolf** [Star Fox]
**Zero Suit Samus** [Metroid]



## SUPER SMASH BROS. FOR 3DS

3DS, 2014

■ This duo of releases is largely similar in terms of content, with the handheld version getting out of the gates slightly ahead of its home console counterpart. Exclusive to the 3DS release, Smash Run mode sees players explore a large level while building their stats, with a random match or challenge taking place at the end.



## SUPER SMASH BROS. FOR WII U

WII U, 2014

■ The main event followed a few months after its 3DS stablemate's release, with loads of additional content – the board game-esque Smash Tour mode, a chaotic eight-player mode, the trials of Special Orders and Event modes and the freedom of the stage builder are all exclusive to the home version. There's also DLC characters aplenty, including Ryu and *FFVII*'s Cloud.

### NEWCOMERS

**Bayonetta** [Bayonetta]
**Bowser Jr.** [Mario]
**Cloud** [Final Fantasy]
**Corrin** [Fire Emblem]
**Dark Pit** [Kid Icarus]
**Duck Hunt Duo** [Duck Hunt]
**Greninja** [Pokémon]
**Little Mac** [Punch-Out!!]
**Lucina** [Fire Emblem]
**Mega Man** [Mega Man]
**Mii Fighter** [Nintendo]
**Pac-Man** [Pac-Man]
**Palutena** [Fire Emblem]
**Robin** [Fire Emblem]
**Rosalina & Luma** [Mario]
**Ryu** [Street Fighter]
**Shulk** [Xenoblade]
**Villager** [Animal Crossing]
**Wii Fit Trainer** [Wii Fit]



plays almost exactly like Mario), every character has their own distinct feel and playstyle. At one end of the spectrum sits Donkey Kong, a heavy and hard-hitting option for those who don't like to mess around when it comes to dealing damage, while at the other is Fox, who relies on little-and-often damage as he darts around opponents. There are agile options who can recover well, characters who do better at range than up close and everything in between – for so small a roster, there's a great degree of variety on offer. This extends to the settings as well, with stages based on every major series represented each boasting their own feel and array of options. From the rising hazards of the *Metroid* stage to the angles of Sector Z's moving ships and Arwings, where you choose to fight is just as important as who you choose to fight with. If in doubt, just plump for the Kirby stage – it has the best music and, given that competitive staples Battlefield and Final Destination are only available in single-player here, it's hands-down the most level playing field for any given match-up.

If you even want to play fair, that is – the real joy of *Smash Bros.* is found in its versatility, letting you play the way you choose. By default, items will appear or fall into the stage periodically to spice up the battle, both the nature and frequency of these eventually fully customisable. Like the stages and stars, most of these are nods to classic Nintendo games or power-ups – something taken further still by the Assist Trophies in later games, which call in cameos from even more famous characters – and you can get your hands on everything from Poké Balls that unleash random monsters to the hammer that helped Mario thwart Donkey Kong way back when he still went by Jumpman. Fans of mayhem can crank up the drop rate to ensure non-stop silliness, house rules can be established where certain items are banned and purists can get rid of them entirely, shifting the focus – nay, the genre – from entertaining party game to adept fighter.

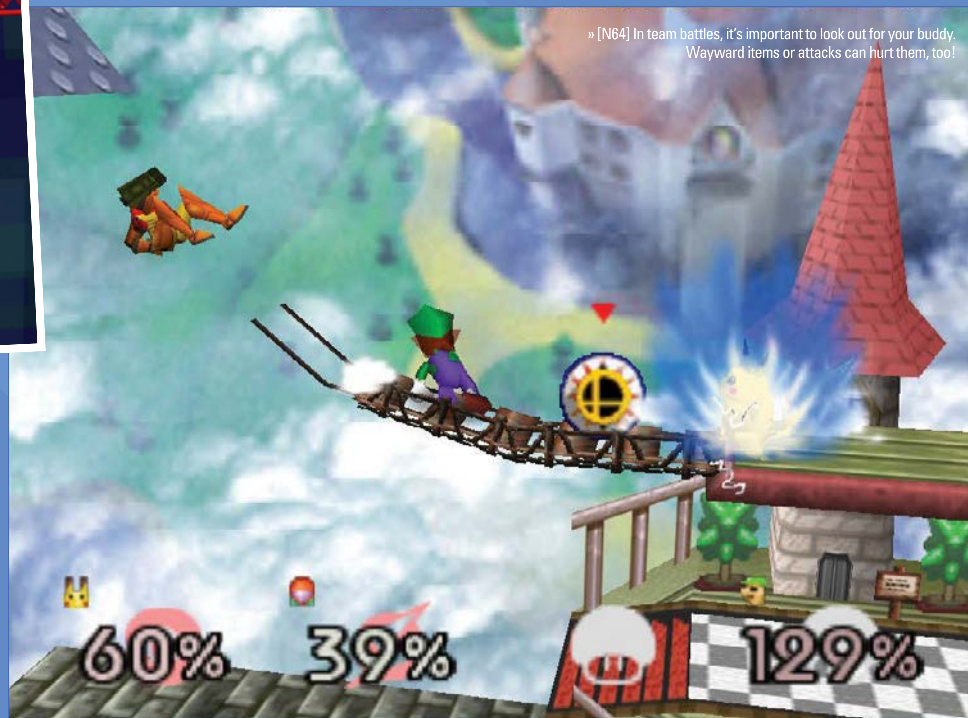
Combat itself is novel in that the game doesn't feature traditional health bars. Instead, damage accrued




» [N64] With such an amazing cast at Nintendo's disposal, why is the final boss just a giant hand?



» [N64] While there's not a great deal more to do than simply brawl, additional modes like this help teach you what each character can do.



» [N64] In team battles, it's important to look out for your buddy. Wayward items or attacks can hurt them, too!

by each character is tracked as a percentage at the bottom of the screen, with higher values increasing the effects of additional powerful blows. This feeds directly into the goal of the game, which is to knock opponents off the stage. Any side of the screen will do the trick, with different characters and levels all prioritising different approaches – small stages like Dream Land make blasting rivals off the side the quickest way to go, while characters with strong spiking attacks often do better to stomp their foes off the bottom of the screen. Where possible, that is, as things like the rising acid on the *Metroid* stage deal damage and blasting those who touch it back upwards with considerable force.

The higher your percentage goes, the greater the risk of being sent flying by even the most innocuous of attacks – powerful, well-placed smash attacks can usually finish the deal from around the 50 per cent mark, with 100+ (the maximum is 999, at which point a gentle breeze is enough to finish you off) marking the point at which you need to start being extra careful. Matches are played either for time – where KOs and deaths are tallied up after a fixed period to decide a winner – or for stocks, each fighter having a set number of lives to use before they are eliminated entirely. Coming back into a great fight at 0 per cent after being knocked out is a delight, especially if you'd been panicking about the inevitable KO previously – a chance to be a little more reckless and aggressive with your attacks, and also to exact revenge on whoever it was that didn't think you deserved to be on the screen any more.

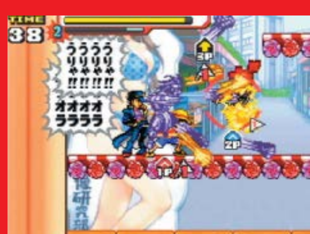
For a game with only two attack buttons, there's a surprising degree of depth to *Smash Bros.* and its high-octane combat. The B button is used for special moves, which performs one of three signature attacks when combined with directional inputs – in the N64 original, only up, down and neutral specials exist, but *Melee* added a fourth direction one for left/right inputs. The title ties into the game's novel use of the analogue stick, where gentle movement of the stick and 'smashing' it quickly in the required direction produce different effects. Do this to move and dash, rather than walk; do it with your standard A button attacks and you'll see them upgraded to powerful Smash attacks, generally the best way to introduce opponents to the gaping off-screen abyss. It feels a little strange at first, unresponsive even, almost like you're not in full control. But just like in any other game that makes good use of analogue control, you come to learn your limits and work on your execution, eventually arriving in a place where everything happens exactly as you want it to, barely having to even think about it. That it isn't only played alongside the likes of *Street Fighter* and *Tekken* at tournaments of the highest level, but pulls in comparable figures in terms of entrants and viewers is telling of ▶

## SMASH SIBLINGS
**Just some of the many pretenders to Nintendo's throne**



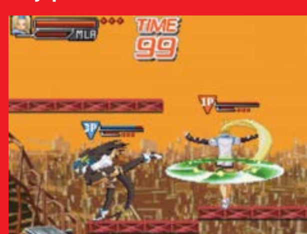
### DREAMMIX TV WORLD FIGHTERS
GC/PS2, 2003

■ Nintendo's success with *Smash* was in bringing together the great brands that already existed under its umbrella. This brawler pinched bits and pieces from all over the place – from Hudson and Konami games to Takara toy lines – and it felt like a bit of a disparate mess for the most part. Still, it let us pit Bomberman against Optimus Prime, so that's something.



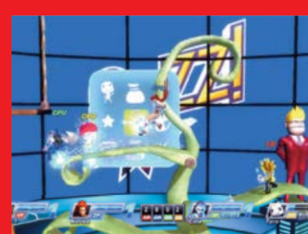
### JUMP SUPER STARS
DS, 2005

■ Japanese manga magazine *Weekly Shonen Jump* certainly has the brands to go toe-to-toe with Nintendo's big hitters and this is probably the best *Smash* clone we've seen. Pulling in characters and settings from *DragonBall*, *Yu-Gi-Oh!*, *One Piece*, *Bleach*, *Naruto* and *Death Note* (among loads of others), it's a colourful and hyperactive alternative, although it only came out in Japan.



### GUILTY GEAR: DUST STRIKERS
DS, 2006

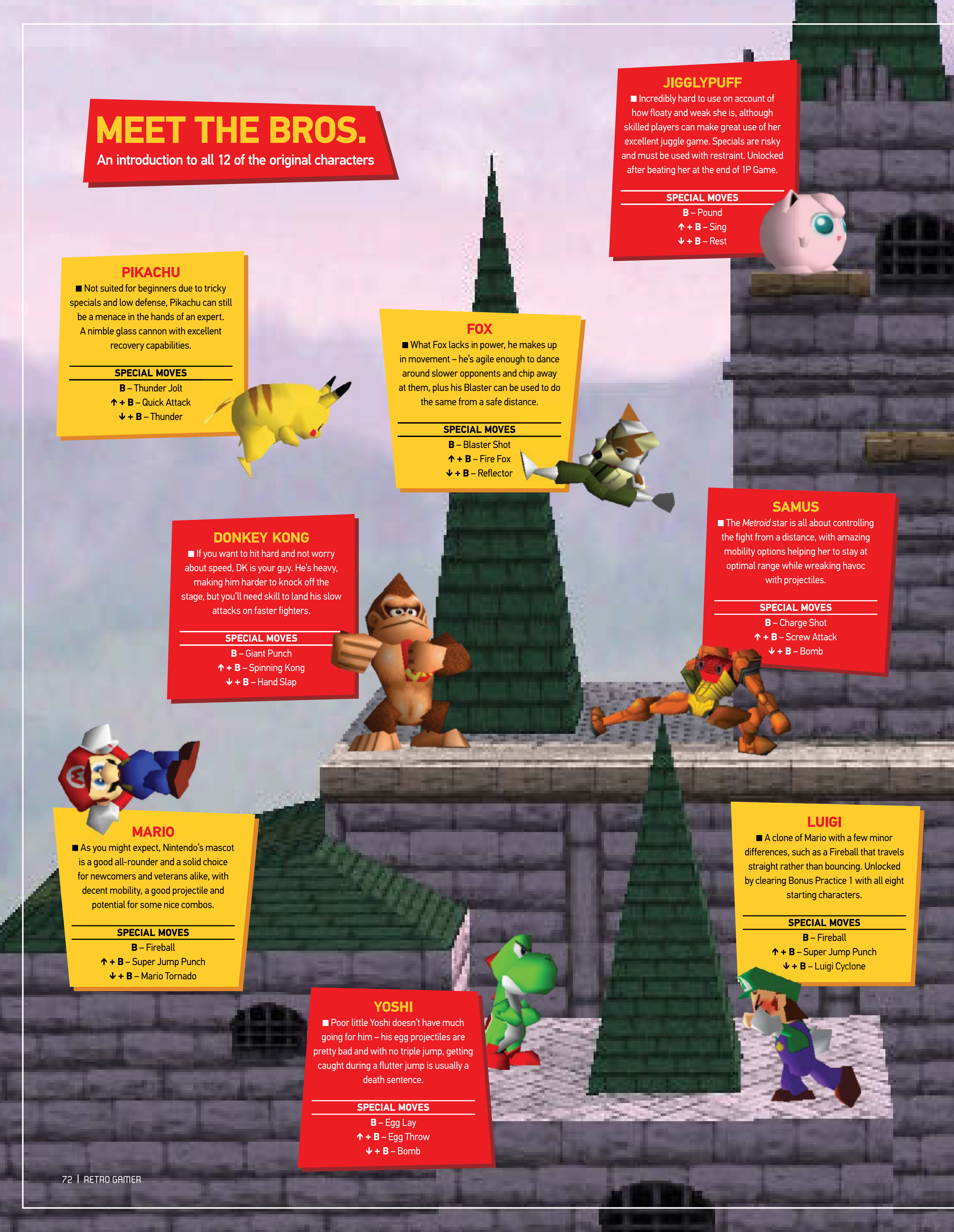
■ While it made respectable use of the stacked dual screens to offer stages with plenty of vertical space, the low resolution did absolutely nothing for *Guilty Gear*'s usually gorgeous art and fights ended up just being ugly and extremely hard to follow. Perhaps the series should stay in its one-on-one comfort zone – PS2 four-way fighter *Isuka* wasn't a whole lot better.



### PLAYSTATION ALL-STARS BATTLE ROYALE
PS3/VITA , 2012

■ It's fair to say that the roster of Sony's *Smash* rival didn't quite have the same clout as that of the series that clearly inspired it – the likes of Drake, Kratos, Cole, Sweet Tooth and Dante meant there were a lot of human characters, and not even Sackboy, PaRappa and Toro could redress the balance. It's actually pretty good, just not on the same level as *Smash*.





# MEET THE BROS.

An introduction to all 12 of the original characters

## JIGGLYPUFF

■ Incredibly hard to use on account of how floaty and weak she is, although skilled players can make great use of her excellent juggle game. Specials are risky and must be used with restraint. Unlocked after beating her at the end of 1P Game.

**SPECIAL MOVES**

**B** – Pound
**↑ + B** – Sing
**↓ + B** – Rest

## PIKACHU

■ Not suited for beginners due to tricky specials and low defense, Pikachu can still be a menace in the hands of an expert. A nimble glass cannon with excellent recovery capabilities.

**SPECIAL MOVES**

**B** – Thunder Jolt
**↑ + B** – Quick Attack
**↓ + B** – Thunder

## FOX

■ What Fox lacks in power, he makes up in movement – he's agile enough to dance around slower opponents and chip away at them, plus his Blaster can be used to do the same from a safe distance.

**SPECIAL MOVES**

**B** – Blaster Shot
**↑ + B** – Fire Fox
**↓ + B** – Reflector

## SAMUS

■ The *Metroid* star is all about controlling the fight from a distance, with amazing mobility options helping her to stay at optimal range while wreaking havoc with projectiles.

**SPECIAL MOVES**

**B** – Charge Shot
**↑ + B** – Screw Attack
**↓ + B** – Bomb

## DONKEY KONG

■ If you want to hit hard and not worry about speed, DK is your guy. He's heavy, making him harder to knock off the stage, but you'll need skill to land his slow attacks on faster fighters.

**SPECIAL MOVES**

**B** – Giant Punch
**↑ + B** – Spinning Kong
**↓ + B** – Hand Slap

## MARIO

■ As you might expect, Nintendo's mascot is a good all-rounder and a solid choice for newcomers and veterans alike, with decent mobility, a good projectile and potential for some nice combos.

**SPECIAL MOVES**

**B** – Fireball
**↑ + B** – Super Jump Punch
**↓ + B** – Mario Tornado

## LUIGI

■ A clone of Mario with a few minor differences, such as a Fireball that travels straight rather than bouncing. Unlocked by clearing Bonus Practice 1 with all eight starting characters.

**SPECIAL MOVES**

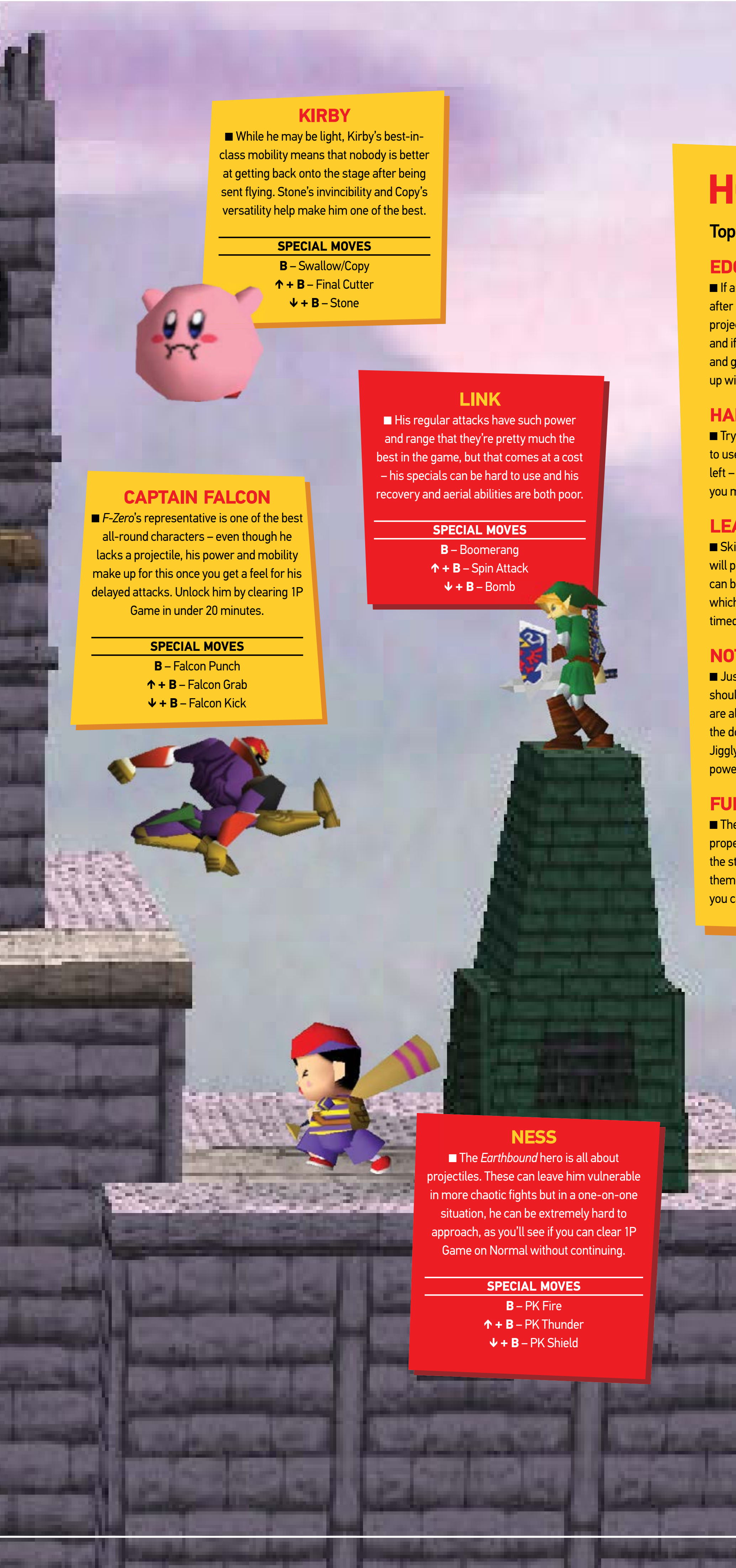
**B** – Fireball
**↑ + B** – Super Jump Punch
**↓ + B** – Luigi Cyclone

## YOSHI

■ Poor little Yoshi doesn't have much going for him – his egg projectiles are pretty bad and with no triple jump, getting caught during a flutter jump is usually a death sentence.

**SPECIAL MOVES**

**B** – Egg Lay
**↑ + B** – Egg Throw
**↓ + B** – Bomb



## KIRBY

■ While he may be light, Kirby's best-in-class mobility means that nobody is better at getting back onto the stage after being sent flying. Stone's invincibility and Copy's versatility help make him one of the best.

**SPECIAL MOVES**

**B** – Swallow/Copy
**↑ + B** – Final Cutter
**↓ + B** – Stone

## LINK

■ His regular attacks have such power and range that they're pretty much the best in the game, but that comes at a cost – his specials can be hard to use and his recovery and aerial abilities are both poor.

**SPECIAL MOVES**

**B** – Boomerang
**↑ + B** – Spin Attack
**↓ + B** – Bomb

## CAPTAIN FALCON

■ *F-Zero*'s representative is one of the best all-round characters – even though he lacks a projectile, his power and mobility make up for this once you get a feel for his delayed attacks. Unlock him by clearing 1P Game in under 20 minutes.

**SPECIAL MOVES**

**B** – Falcon Punch
**↑ + B** – Falcon Grab
**↓ + B** – Falcon Kick

## NESS

■ The *Earthbound* hero is all about projectiles. These can leave him vulnerable in more chaotic fights but in a one-on-one situation, he can be extremely hard to approach, as you'll see if you can clear 1P Game on Normal without continuing.

**SPECIAL MOVES**

**B** – PK Fire
**↑ + B** – PK Thunder
**↓ + B** – PK Shield

# HOW TO SMASH

**Top tips for any wannabe bros.**

### EDGE GUARDING

■ If an opponent is trying to make their way back onto the stage after being knocked off, don't just let them back in for free! Toss projectiles and items their way to make it more difficult for them, and if you can, use a downwards spiking attack and/or drop down and grab the ledge yourself before they reach it, safely rolling back up with Z to prevent them getting back on solid ground.

### HALF EMPTY

■ Try to get a feel for how many uses each item has. If you're first to use it, you should aim to throw it away with only a charge or two left – the next owner won't know it's about to become useless and you might just buy yourself a little time as they realise.

### LEARN TO LOVE Z

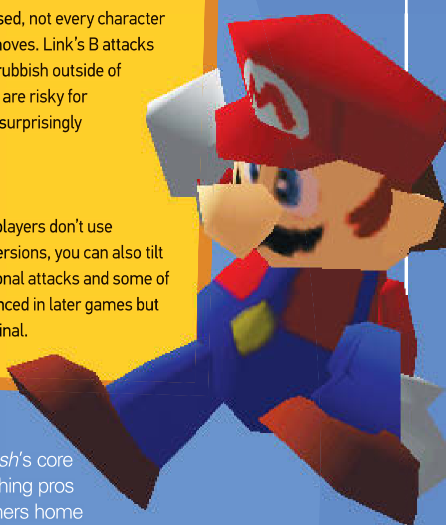
■ Skilled use of the trigger is crucial to good play. While held, you will put up a shield to prevent damage – use this sparingly as it can be depleted quickly. Tap a direction while guarding to roll, which can lead to great openings against slower fighters when timed and spaced well.

### NOT THAT SPECIAL

■ Just as Smash attacks shouldn't be abused, not every character should be looking to rely on their special moves. Link's B attacks are all very situational, Yoshi's are largely rubbish outside of the down+B pound and both Sing and Rest are risky for Jigglypuff – look to use throws (which are surprisingly powerful) and regular combos instead.

### FULL TILT

■ There's a third type of attack that many players don't use properly – as well as neutral and Smash versions, you can also tilt the stick slightly in directions to use additional attacks and some of them are really good. This is more pronounced in later games but you can still perform tilt attacks in the original.



▶ the quality of *Smash*'s core mechanics, and watching pros compete really hammers home just how much more there is to the game than most people who play casually even realise.

While the first game may not have had a great deal going on in terms of modes and options, however, the same criticism cannot be levelled at any of its sequels. Each piled on additional content – loads more playable characters, additional items, cool new modes and in-game trophies and achievements all come together to make every *Smash* game since the first an incredible proposal in terms of value for money. With so much of the game's charm and appeal coming from its expertly-handled fan service, covering more bases just serves to write beautiful new verses in this love letter to all things Nintendo. What was once a fairly basic fighter is now one packed with potential and options; what was one a fairly low-key novelty now one of the most prominent fighting games on the scene. If ever you need reminding what's so good about Nintendo, just go play *Smash* – the ultimate collection of Nintendo's greatest hits and a way more adept fighting game than many give it credit for. ✱




# CLASH OF THE HANDHELDS

Not all handhelds are created equal. Some are powerhouses that can only run for minutes, others capture the imaginations of players with more than just technical wizardry. Join us as we raid the archives in search of the greatest (and worst) handhelds ever…

# Game Boy



**One of the most famous consoles of all time, the Game Boy occupies the same upper echelon as the Sony Walkman and Apple iPod when it comes to brand awareness.** Released in 1989, the brick-like portable embraced creator Gunpei Yokoi's philosophy that cheap tech could be harnessed in unique ways. Outgunned right from the beginning by rivals such as the Lynx and Game Gear, Nintendo's handheld was primitive but had what mattered most; namely amazing stamina and a killer library of games. Powered by four AA batteries the console was capable of providing between 15 to 30 hours of play, eclipsing its competitors when it came to staying power.

Despite its shortcomings the Game Boy became the dominant force in Nineties gaming, enjoying almost a decade of success thanks to the timely introduction of *Pokémon Red & Blue* in 1995, a title which would kick-start a global phenomenon and sell over 23 million units. Prior to that, the console played host to some amazing pieces of software, including *Super Mario Land 2: 6 Golden Coins*, *The Legend Of Zelda: Link's Awakening*, *Metroid II: The Return of Samus*, and many more besides. Hardware revisions, such as the Game Boy Pocket and Japan-exclusive Game Boy Light, helped to prolong the lifespan of the range, while 1998's Game Boy Color upgrade paved the way for even more commercial success.

**BATTERY LIFE**
Turns four AAs into about 20 hours of gaming

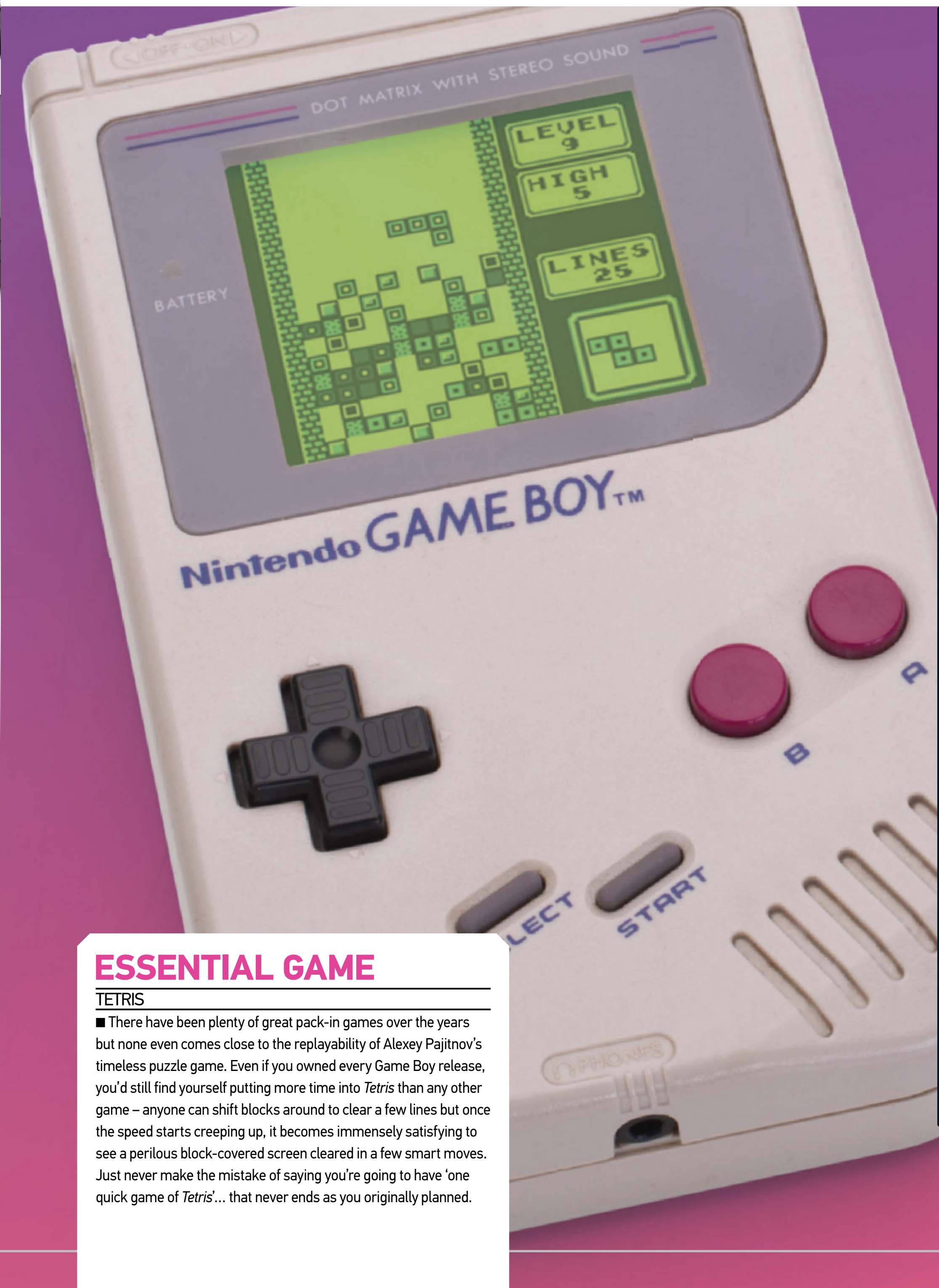
**ERGONOMICS**
Hardly a design masterwork, but certainly functional

**SUPPORT**
Loads of great games, from licensed titles to awesome originals

**TECH**
The first truly viable portable gaming system

**IMPACT**
The bedrock of Nintendo's handheld empire

**SCREEN**
Did the job, but susceptible to ghosting and blurring




## Paul Machacek

**We speak to the Rare coder behind Beetlejuice, WWF Superstars and the Donkey Kong Land about the Game Boy**

**What made the Game Boy so special?**
In today's smartphone-obsessed world It's very easy to underestimate the impact that Nintendo's Game Boy had in 1989. Before Game Boy, handheld gaming systems were crude, with basic LED lights or finite character frames prebaked into LCD screens to represent all elements of gameplay. A console was the whole game, nothing could be changed, and the form factor for each often reflected that. Nintendo brought us a portable device which ran for many hours, could swap game carts that were small enough to drop a few in your pocket and even hook up for multiplayer.

**What was it like to develop for?**
Relative to normal consoles of the day, pretty much the same. Apart from swapping from the NES's 6502 to a Zilog Z80 processor, dropping colours and fiddling around with specs, the general layout was that of a NES with character banks, memory bank switching, VRAM access confined to VBlank/HBlank timings, etc.. Even the control layout was familiar.

**What's your favourite Game Boy title?**
It's not possible to answer this without citing *Tetris*. It became apparent that a lot of people were buying Game Boys without having any previous gaming interest. In fact, lots of early customers probably never bought another game. I'm sure it was lost on many that they could take *Tetris* out and put another game in. The Game Boy was revolutionary, but what would it have been if *Tetris* had not existed?

**Of the games you developed yourself, which are you most proud of today?**
I'd have to say *Donkey Kong Land* as it was the most technically-achieved Game Boy title I wrote, though the engine I created that drove it had been born and iterated on through four *Battletoad* games previously. It also sold north of 4 million copies which is never bad validation!

**Do you think Nintendo will resurrect the Game Boy name?**
Nintendo is a forward-looking company, and one that is very creative. It's successful franchises recur to show off new hardware or gaming elements, but they tend to move on with their main hardware. We're in a world now where everyone has a powerful computer in their pocket, so I think producing a standalone gaming-only device may now be a hard sell.

## ESSENTIAL GAME

**TETRIS**

■ There have been plenty of great pack-in games over the years but none even comes close to the replayability of Alexey Pajitnov's timeless puzzle game. Even if you owned every Game Boy release, you'd still find yourself putting more time into *Tetris* than any other game – anyone can shift blocks around to clear a few lines but once the speed starts creeping up, it becomes immensely satisfying to see a perilous block-covered screen cleared in a few smart moves. Just never make the mistake of saying you're going to have 'one quick game of *Tetris*'… that never ends as you originally planned.

# Microvision



■ Released in 1979 and predating the Game Boy by a decade, *this* is the grandfather of handheld gaming. Naturally, it's enormous and the display – a mere 16x16 grid of black pixels – proved extremely limiting, but the games came with a built-in workaround of sorts. 'Cartridges' replaced most of the front of the device, changing what the 12 available buttons would do and altering the screen slightly via overlays. Not only that, each cartridge even housed its own CPU, hence why they were so expensive (£16 or so, the equivalent of around £75 today). Build quality was less than ideal and between problems like screen rot and delicate cartridges, it's difficult to find one in good working order.

**FIRST HANDHELD**
Released: 1979

BATTERY LIFE
A single 9V battery (two for early versions) could last for ages

ERGONOMICS
Chunky and awkward, but it *was* first on the scene…

SUPPORT
Only twelve games were ever released

TECH
A portable device with interchangeable game was huge at the time

IMPACT
A true pioneer in the handheld gaming market

SCREEN
A tiny monochrome 16x16 pixel LCD display

# Neo-Geo Pocket



■ Launching a console to compete with the Game Boy may have seemed like a good idea in 1998, when SNK was in a position to capitalise on its 2D game experience with a 16-bit handheld as the arcade market shifted towards 3D. Unfortunately, the Osaka-based manufacturer had timed its decision poorly and the Neo-Geo Pocket ended up hitting the market a week after the Game Boy Color. After five months and ten game releases, SNK delivered the Neo-Geo Pocket Color to replace it. Despite flopping, the Pocket's good form factor and battery life were both positive traits that carried over to the upgraded machine. Additionally, its small library is compatible with the updated machine.

BATTERY LIFE
Two AAs will last you an astounding amount of time

ERGONOMICS
Slightly boxy, but the clicky stick is great

SUPPORT
Backwards compatible colour games aside, dire

TECH
A capable device hampered by black-and-white graphics

IMPACT
Barely any, but it did spawn a successor

SCREEN
Reasonable, but its monochrome and past its time

# Game Boy Color



■ Whether smart play on Nintendo's part or fortunate coincidence, most of the focus testing for Game Boy Color had been done by other systems. It was clear that players wanted portable colour games, but not at the expense of bulky form or pitiful battery life. An affordable system that ticks those boxes can still fail without brand recognition, so for its true upgrade to the Game Boy, Nintendo went down the checklist leaving hearty thick ticks along the way. Name and shape were familiar; backward compatibility meant Game Boy owners could enjoy an instant library, colour screen and great battery life, the holy grail for handhelds at the time, achieved. Just another Nintendo success story, then…

BATTERY LIFE
Excellent longevity, largely due to not having a backlight

ERGONOMICS
An improvement over the original grey box, for sure

SUPPORT
Loads of existing games, plus cross-compatible and exclusive titles

TECH
Not hugely impressive but the logical progression for the brand

IMPACT
The days of monochrome were finally over for Nintendo

SCREEN
No backlight, but the quality isn't too bad

# PSP



**Sony had been rumoured to venture into the handheld market since it first arrived on the gaming scene.** So while the reveal of the PSP at E3 2004 didn't come as a surprise, what *did* surprise us was how seriously Sony was taking this debut. Looking more like a high-end multimedia gadget than a traditional games machine, Sony was attempting to reproduce the magic that had given it the lead in the console race – by making handheld gaming 'cool', it was looking to attract players that might have been put off by the design and marketing of most alternatives that had always been aimed at the younger end of the demographic.

To this end, PSP was indeed developed as a multimedia platform rather than a regular console, its proprietary UMD disc format serving not only as the primary system of software delivery but also for TV shows and movie, with over 650 releases globally for the brand-new format. The system could also run media, such as movies or music, direct from the memory stick, effectively combining the functionality of devices like the iPod and high-end phones with the best portable gaming hardware on the market.

All of this could have been an incredible recipe for success for Sony, only Nintendo had other plans… well, possibly. Whether by design or by pure fluke, the DS would attract the attention of players of all ages, a range of accessible games pulling in younger and older audiences alike while Sony was laser-targeting the young adult market. Nintendo's universal approach worked and DS was a phenomenon, leaving PSP – despite being the most successful challenger Nintendo had ever seen – to feel like something of a failure. Which, having shifted over 80 million units, is pretty darn far from the truth. A wonderful handheld with a cracking library, even if it *still* couldn't quite escape from Nintendo's shadow.




BATTERY LIFE
Not terrible, but drained quickly by UMD spin-up and/or high brightness

ERGONOMICS
Looks pretty cool, but the shoulder buttons and analog nub are nasty

SUPPORT
It launched a bespoke media format, Sony must have done something right

TECH
Few who saw it running early could believe their eyes

IMPACT
Arguably the only handheld to ever give Nintendo a good fight

SCREEN
Bright and clear – does the hardware justice

## Game Gear



■ Sega's most notable handheld had a far better run than many give it credit for – with over 10 million sold over its seven-year lifespan, it was pretty successful compared to most of the other consoles featured here. There are a number of possible reasons for it to be overlooked – the Game Boy was dominant on the scene and the Lynx had already beaten Sega's machine to wowing the world by offering a colourful alternative. Software also counted for a lot and while looking back there are a number of important and fondly remembered titles for Nintendo's system – primarily in the fields of stacking blocks (sorry, *Columns*…) and catching monsters – the same really can't be said of the Game Gear's library. That's not to say there weren't still great games and exclusives, because there were… they were simply, like the handheld itself, not quite as mainstream as the competition.

As with other systems on this list, the Game Gear could be seen to be ahead of its time. In fact, both systems did at well enough to prove that there was a market for more advanced handhelds, albeit one that would take a ironic twist – Nintendo followed up its Game Boy with a well-received colour version once its rivals had pulled the plug, a cheaper price point, existing brand and library and generous battery life helping it succeed where its rivals had fallen a few years earlier.

**BATTERY LIFE**
You'd be lucky to get over three hours out of six AAs…

**ERGONOMICS**
Chunky and heavy, but not all that uncomfortable

**SUPPORT**
Sega backed it well, but standout exclusives are quite rare

**TECH**
Effectively portable Master System tech – not too shabby

**IMPACT**
Never stepped out of Game Boy's shadow, but highlighted a demand for colour

**SCREEN**
Pretty good, but also the primary reason for the power thirst







### SATELLITE HANDHELDS

■ Sega and Sony believed they could extend the gaming experience beyond the home console, resulting in the Visual Memory Unit and the PocketStation. These devices functioned as memory cards, and you could save minigames onto them from your games. These would often allow you to make progress while you were away from your console. Both were very limited pieces of hardware and the idea didn't catch on as memory cards would become extinct years later.

### ESSENTIAL GAME

**GRAND THEFT AUTO: LIBERTY CITY STORIES**

■ While *Monster Hunter* may be the bestselling franchise on the system, that's hardly reflective of worldwide sales – Japan accounts for around 90 per cent of PSP *Monster Hunter* sales. In any case, what better example to present for a console boasting that it could do console-standard games on the move than a console-standard game? Sure, it's not exactly the full-fat mind-blowing, detail-packed savage satire of modern culture that the main games deliver but considering the limitations of the hardware, this open world crime spree is absolutely outstanding. With a few more titles of this scope, scale and stature throughout the PSP's life, if could quite easily have enjoyed far more success than it actually did…

## WonderSwan Color



■ Bandai didn't have a great deal of luck with the WonderSwan, first assuming that a budget monochrome system would still have a chance when Game Boy had already gone colour, then dropping its own colour version of the WonderSwan mere months before the arrival of the more powerful Game Boy Advance. For all this misfortune, however, Bandai managed to make a relative success of things, with some excellent licensed titles and established brands joining its library to help the system claim nearly a ten per cent share of the Japanese handheld market at its peak. But in Japan the handheld would stay, sadly – despite discussion of a broader release, it never came to pass.

**BATTERY LIFE**
20 hours or so from just one AA battery

**ERGONOMICS**
The curious shape allows for several configurations

**SUPPORT**
A fair few big names were on board, if not for long

**TECH**
Surprisingly good, although quickly surpassed

**IMPACT**
GBA absolutely stole its thunder

**SCREEN**
Okay on the basic model, really nice on the Crystal variant

## N-Gage



■ With the mobile market booming and Nintendo still unshakeable at the time, Nokia decided to bring the two audiences together and the N-Gage was born. And while it *was* successful in uniting phone and gaming enthusiasts, they were primarily united through mockery of this device. The concept was a good one but execution left much to be desired – as a games platform, the awkward button layout, irregular screen format and the fact that you have to remove the battery to change game cards were huge turnoffs. Although most of these issues were addressed with the QD revision, reduced functionality made it less attractive as a hybrid device, and the damage had already been done.

**BATTERY LIFE**
Around three hours for gaming; more on the QD

**ERGONOMICS**
The worst parts of handset and handheld design, thrust together

**SUPPORT**
A modest library, but it attracted some big names

**TECH**
Competent 3D visuals for a non-dedicated device

**IMPACT**
Ahead of its time, in a way – the smartphone revolution followed

**SCREEN**
Decent quality, but a portrait screen isn't ideal for gaming

## GP32



■ Korean firm Game Park and its follow-up companies produced a number of handhelds along the same lines – powerful devices with minimal support in terms of bespoke games (having *any* of these was what qualified this for inclusion in the first place) but amazing potential for custom software. In truth, this power was (and is) largely used for emulation, with both the GP32 and the GP2X being ahead of the rest of the pack tech-wise and being relatively easy to fill with homebrew and roms that would run excellently. Today, Android tablets and portables still fill this same niche – the GPD XD is a notable example of something that builds on the legacy that Game Park and its stablemates created.

**BATTERY LIFE**
Two AAs offer 6-10 hours, varying with strain

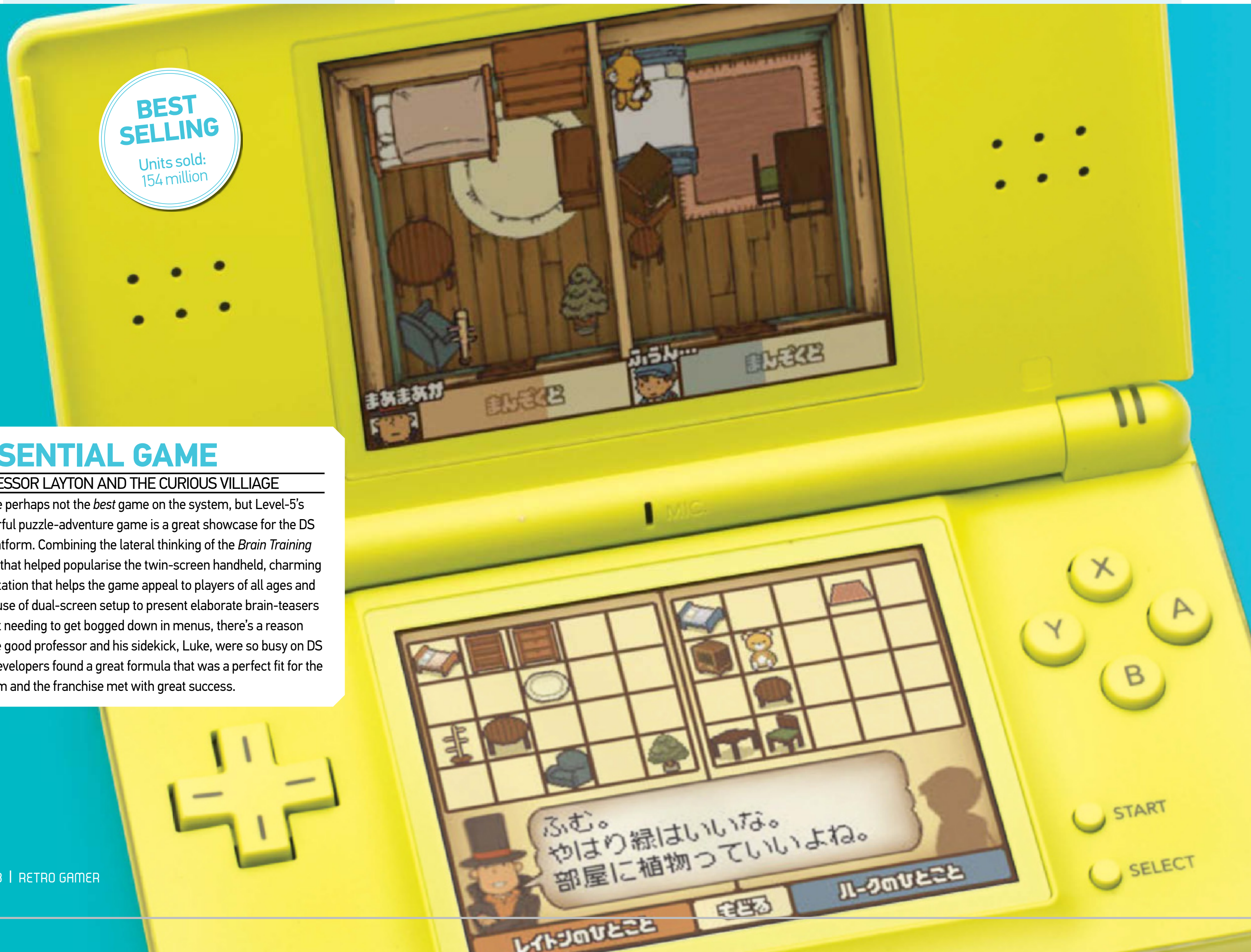
**ERGONOMICS**
Ridged triggers are nasty, but sits comfortably in the hands

**SUPPORT**
Few original games – primarily used for homebrew and emulation

**TECH**
Extremely powerful for its time, as were its successors

**IMPACT**
The first in a long line of homebrew-led handhelds

**SCREEN**
Good clarity; available unlit, frontlit or backlit




**BEST SELLING**
Units sold: 154 million

## ESSENTIAL GAME

PROFESSOR LAYTON AND THE CURIOUS VILLIAGE

■ While perhaps not the *best* game on the system, but Level-5's wonderful puzzle-adventure game is a great showcase for the DS as a platform. Combining the lateral thinking of the *Brain Training* games that helped popularise the twin-screen handheld, charming presentation that helps the game appeal to players of all ages and smart use of dual-screen setup to present elaborate brain-teasers without needing to get bogged down in menus, there's a reason that the good professor and his sidekick, Luke, were so busy on DS – the developers found a great formula that was a perfect fit for the platform and the franchise met with great success.




## MOBILE GAMING

■ For this rundown, we limited inclusions to only those devices that run games on dedicated removable media. One emerging sector of portable gaming this precludes is gaming on mobile devices. Both the Google Play Store and the App Store operate much like the digital marketplaces available on modern consoles, albeit with a shovelware quotient that even the DS would balk at. There are plenty of awesome games out there – you just typically have to wade through lakes of dross and money leeches to find them.




**MOST POWERFUL**

Up to 2 GHz Quad-core ARM Cortex-A9 MPCore

# Vita



■ 'Give customers what they want,' says common sense when it comes to introducing a new product. But with the Vita, Sony went with the somewhat riskier 'give customers what they provably *don't* want' approach, ignoring lessons learned from the PSP's relative failure, despite technical supremacy, to create the most powerful handheld on the market once again. As impressive as it is – the small, beautiful screen allows for almost PS3-quality visuals and functionality is excellent – the rise of the smartphone made this leap in power decreasingly relevant with each passing year, once again allowing Nintendo's weaker, more affordable system to dominate the market.

**BATTERY LIFE**
Burns bright, but burns out pretty fast

**ERGONOMICS**
Comfortable and wonderfully designed

**SUPPORT**
First-party love dried up quick, but indies keep it alive

**TECH**
Outstanding hardware allows for actual console-quality visuals

**IMPACT**
It seems highly unlikely Sony will try this a third time…

**SCREEN**
OLED perfection – the literal centerpiece of the system

# DS

**Abandoning the Game Boy name was always going to be a risk for Nintendo and the company knew it – hence the fact that its new and rather odd-looking, dual-screen handheld was positioned as a 'third pillar' at the time of release in 2004, alongside the GameCube and the refreshed Game Boy Micro handheld, a miniaturised revision of the existing Game Boy Advance.** This move indicated a lack of faith in the platform, and the fact that the DS was going up against Sony's PSP caused some industry experts to cast doubt over its prospects, but almost from the beginning it was clear that Nintendo worked its magic yet again. While technically inferior to Sony's handheld, the DS offered touchscreen control, a genuine innovation for the time. The two screens were also put to good use in games, granting players two perspectives on the action or offering space for inventory screens, maps and menus without having to pause the game. The DS also illustrated Nintendo's understanding of portable play; the clamshell design protected the screens when in transit, meaning that players would be more inclined to carry the unit around with them than owners of the PSP, which felt positively fragile in comparison. The original DS model had all the hallmarks of a design rush job, but the subsequent refresh – the gorgeous DS Lite – took inspiration from Apple's range of desirable tech to present consumers with a machine that looked attractive, even when it was switched off. Touch control broke down barriers when it came to grabbing an audience, and the DS was snapped up by gamers of all ages – even those



of advanced years, who were no doubt influenced by the proliferation of brain-training titles for the console. While it's tempting to label the DS as a 'casual' system, there were plenty of solid triple-A titles on the format, including *Castlevania: Dawn Of Sorrow, The Legend Of Zelda: Phantom Hourglass, Phoenix Wright: Ace Attorney, Grand Theft Auto: Chinatown Wars, Chrono Trigger* and more besides. Then there were the mainstays of Nintendo's catalogue, such as *Super Mario 64 DS, Mario Kart 7* and – naturally – the prerequisite *Pokémon* outings. 2008's DSi hardware refresh would offer twin digital cameras and an online app store, as well as a revised design, larger screens and the ability to insert removable memory cards. With over 154 million units sold worldwide, the DS range ranks as the second-bestselling console of all time – a solid indication of its rightful position as one of the undisputed greats of the portable arena.



**BATTERY LIFE**
Eight hours or so with the backlight on per charge

**ERGONOMICS**
Horrible original design, redeemed by the Lite and DSi

**SUPPORT**
An insane library spanning every genre imaginable

**TECH**
An affordable precursor to today's tablet craze

**IMPACT**
Smashed age barriers to open gaming back up to everyone

**SCREEN**
Clear top screen, touch-capable lower screen – a solid combo

# Lynx






**LARGEST HANDHELD**
Dimensions: 328 x 172 x 106mm

**Developed by the same team as the groundbreaking Commodore Amiga, the Atari Lynx was the world's first colour handheld, being released just a few months after the Game Boy in 1989.** Originally named 'The Handy' while in development at Epyx, the Lynx boasted a number of incredibly advanced features for the time, not just for a handheld but for any system out there. As well as featuring a vast palette of 4,096 colours, the Lynx's graphics chip, called Suzy, could also display many sprites as well as being able to scale and rotate objects – something that could only be found on state-of-the-art arcade hardware at that time. Mikey, the Lynx's sound chip, was no slouch either, being able to play high-quality sound samples across any of its four channels without any burden on the CPU. Add in a blitter chip, 16-bit data bus and the ability to link up to sixteen consoles together (which is where the Lynx gets its name) and surely you have a winning package.

However, the Lynx was let down in several key areas that stopped it from being the huge success that it deserved to be. The first was the size, it was far bigger than the Game Boy with the original model being near enough a foot long. The revised model went someway to correcting this but it was still bulky in comparison. The Lynx's fully-backlit LCD screen also destroyed batteries with ease, and its five to six hours of play just couldn't compare to the Game Boy with over 20, although it should be noted it was better than the Game Gear in this regard. The biggest downfall of the Lynx, however, was Atari's inability to support the machine as well as was needed with only 72 games being released during its commercial lifetime.

**BATTERY LIFE**
Incredibly power-hungry, even more so with rechargeable batteries

**ERGONOMICS**
Somewhat large, but Lynx II was a marked improvement

**SUPPORT**
A fairly small library, but some big titles in there

**TECH**
The first colour portable – that's a pretty big deal

**IMPACT**
Didn't help Atari much, but proved demand for colour

**SCREEN**
Fair for the time, but doesn't hold up well today

## Supervision



■ For Sega and Atari, the solution to the Game Boy problem was to out-muscle the competition. Watara didn't agree with that approach – it reasoned that the best way to compete with Nintendo was to undercut it on price, and the Supervision was the result of that line of thinking. It was a decent bit of kit, only let down by a screen that was prone to blurring. Of course, the price had to be appealing because the software had zero market value. Third-party developers included Thin Chen Enterprise/Sachen (known for its unlicensed NES games), the UK studio BITS and obscure studios Bon Treasure and GTC. As a result, the system hosted a decent number of clones of popular games before fading away quietly.

**BATTERY LIFE**
20-odd hours from four AAs, comparable to the Game Boy

**ERGONOMICS**
Not as awkward to hold as it looks

**SUPPORT**
Nothing of note, but some decent clones

**TECH**
Not that bad for such a low-budget device

**IMPACT**
At least it tried...

**SCREEN**
Rather blurry, but to be expected for the price

## Pokémon Mini



■ There are a few handhelds on display here with small libraries, but this oddity has the most modest of the lot – only ten games exist (several only released in Japan) and all are incredibly simple in order to accommodate the small screen and buttons. Nobody is going to tell you the Pokémon Mini is their favourite console but it just goes to show the dominance of Nintendo at its prime that it was able to create a spinoff handheld system for one of its most popular brands. Pokémaniacs will have enjoyed the little thing as an item of curiosity, but we'd be surprised if some people had even seen one before – it's hardly the most well-known Nintendo handheld of all time, after all.

**BATTERY LIFE**
One AAA battery goes an unbelievably long way

**ERGONOMICS**
Surprisingly usable for something so very small

**SUPPORT**
Ten games total, limited visibility outside of fans

**TECH**
Not bad at all, considering the size of the thing

**IMPACT**
Neat for the fans, unknown to everyone else

**SCREEN**
Simple and tiny, but it got the job done

**SMALLEST HANDHELD**
Dimensions: 74 x 58 x 23mm

## Nomad



■ Introduced more as an addition to Sega's family of consoles than a successor to the Game Gear, the Nomad is a curious beast. On the one hand, it has power on its side – based on the Mega Jet (Sega's portable Mega Drive for in-flight use in Japan), it's a portable Mega Drive. But that came at a price, namely a chronic thirst for fresh batteries, a small screen that can make text difficult to read (and that doesn't cope well at all with fast scrolling) and a limited, US-only production run. An extremely late release (it actually launched after the PlayStation) and a high price point didn't help its cause much at the time, but it remains, as it was then, a desirable and undeniably cool piece of kit.

**BATTERY LIFE**
Two hours out of six AA batteries… ouch.

**ERGONOMICS**
Bulky, heavy and awkward to hold

**SUPPORT**
No original titles, but full Mega Drive game support

**TECH**
Portable Genesis tech was certainly an impressive feat

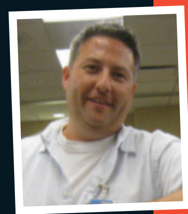
**IMPACT**
Limited and late US-only release, and hardly practical

**SCREEN**
Bright and colourful but blurs heavily with quick movement




# D. Scott Williamson

## We speak to the genius behind three of the Lynx's best arcade ports in RoadBlasters, Toki and S.T.U.N. Runner



**What makes the Lynx so special?**
It was way ahead of its time – portable, colour, networkable, left and right handed. It had fast multiply and divide hardware, impressive multichannel sounds, copy-protected cartridges and, probably most impressive to me, were the innovations in graphics. True bitmapped graphics with hardware collision detection, the ability to draw compressed sprites with skew and scale which can be combined to do rotations and lots of other tricks. It was possible to render triangles and real-3D models on the platform for games like *Hard Drivin'* and *Steel Talons*. And as if the hardware wasn't enough, it was the first game system I used that had complete documentation and a full SDK.

**What is the Lynx hardware like to work with?**
It was a dream! It was great to program for and when I had a crazy idea of how to make the hardware do something new, it usually yielded the results I hoped for.

**Why do you think the Lynx should be remembered?**
I think every game platform should be remembered for its games. Nothing else matters if it doesn't entertain people, and by that standard I think the Lynx was an exceptional platform. For me personally, there was more to the Lynx, I think the Lynx stands out in videogame history for being one of the most forward-thinking, ahead-of-its-time platforms. More advanced platforms came later, but I can't think of a single one that contained as many leaps and innovations in so many areas, and in a way that was so well done. Working on it really was like working on videogames for the future.

## ESSENTIAL GAME

S.T.U.N. RUNNER

■ Although the Game Boy and Game Gear had a host of impressive arcade conversions in their respective libraries, the Atari's Lynx thrived on them. Access to the Atari vaults ensured Atari Games had access to a whole host of gems and many of them made the leap over to Atari's powerful console. While the likes of *Klax*, *Rampage*, *Toki*, *Robotron: 2084* and *Rampart* were all highly impressive (and hold up well today) it's perhaps *S.T.U.N. Runner* that summed up everything that was great about Atari's machine. It delivered cutting-edge technology, intense gameplay and virtually every aspect of the original arcade game. It also put all the home ports to shame, too.

# 3DS



■ Following its successes with the Wii's motion control and the DS's twin screens and touch control, it feels like Nintendo got a tad carried away with its gimmicks. The original 3DS model and its early games could be difficult to play, but later games and hardware revisions would refine the effect. Despite the 3D functionality reducing its technical capacity, the combination of the brand and Nintendo's franchises would be enough to carry it, with the likes of *Mario*, *Pokémon* and *Zelda* all well represented. Well, that and a deserter from the PSP camp – *Monster Hunter*, the bestselling handheld series in Japan, journeyed across to Nintendo's handheld shortly after its release, injecting a level of confidence into the system.

**BATTERY LIFE**
Poor, but improves when you have the 3D turned off

**ERGONOMICS**
Just like the original DS – clunky at launch but vastly improved later

**SUPPORT**
The leading handheld of the modern age, with a great library

**TECH**
Glasses-free 3D is neat, although tech is still behind its peers

**IMPACT**
Could this be the end of the road for traditional handhelds?

**SCREEN**
With the right game, setting and hardware revision, the 3D effect is ace



## Gizmondo



■ One of gaming's greatest disasters, the Gizmondo was sent out to die. Having somehow found a name even worse than the originally-planned Gametrac, its creators went about showcasing how *not* to release and support a system – a star-studded launch party and premium London retail outlet perhaps weren't the most savvy investments for a device with only a handful of games, with the limited production run making it impossible for the ill-fated handheld to ever turn a profit. The company behind the system declared bankruptcy less than a year after the European launch of the device, bringing the tale of gaming's least-successful handheld to the conclusion everybody saw coming.

**BATTERY LIFE**
Around four hours of gaming from a full charge

**ERGONOMICS**
Ugly and overcomplicated, but not all that uncomfortable to hold

**SUPPORT**
Only 14 games released, discontinued in less than a year

**TECH**
Modest hardware, especially next to the PSP

**IMPACT**
Awful sales, zero legacy

**SCREEN**
Adequate but not great, especially for media playback

## Game.com



■ When Tiger Electronics left LCD games for handheld console gaming, we never thought the company would mess things up as badly as it did. The external promise was enticing – apart from having a touchscreen interface and various built-in functions, the machine could connect to the internet. What's more, Tiger's licensing work allowed it to draw on a dream of top franchises, including *Sonic The Hedgehog*, *Mortal Kombat*, *Duke Nukem* and *Resident Evil*. The reality was less exciting. The internet cartridge required a fixed modem, the touchscreen was fiddly and was rarely used in games, and the screen was so blurry as to make all but the slowest of games unplayable.

**BATTERY LIFE**
Four to six hours from four AAs, but why?

**ERGONOMICS**
A big ol' slab of disappointment

**SUPPORT**
A modest library, and almost universally awful

**TECH**
Some neat ideas, but wrecked by dire execution

**IMPACT**
At least it showed the world how *not* to make a handheld...

**SCREEN**
A blurry monochrome mess

## TurboExpress



■ While the Game Boy was offering an affordable low-end hardware option, NEC came stomping into the playground with the opposite – a full-colour handheld that cost three times as much. From a technical standpoint, this thing was crazy – at a time when portable games were either monochrome or much simpler than their home counterparts, to have console-standard visuals and gameplay in your pocket was an incredible feeling. Sadly, it wasn't one that many would have had the privilege of knowing while growing up – it never had the same visibility as its competitors (hardly surprising, given the price) and ended up coming in fourth place behind Game Boy, Game Gear and Lynx.

**BATTERY LIFE**
Six AA batteries allow for up to three hours of play

**ERGONOMICS**
Quite large and heavy, but that was the price of power

**SUPPORT**
Full TurboGrafx-16 HuCard support, but little bespoke

**TECH**
All the power of a PC Engine... in your pocket

**IMPACT**
Carved itself a small niche as a high-end option

**SCREEN**
Generally pretty good, but small text can be an issue




## STANDALONE GAMES/DEVICES

■ Things like the Game & Watch and one-off LCD games have coexisted with handhelds for a long time. Some of the Nintendo ones are classics, simple games that demand constant replay to master, while others are appalling. Cost plays a huge part in the differences between these units and consoles but there are few examples where we can say we'd rather take the cheap device than save up and invest more interesting catalogue…

## ESSENTIAL GAME

POKÉMON: FIRE RED & LEAF GREEN

■ If you're starting out your *Pokémon* journey today, you might be tempted to pick up one of the original monochrome Game Boy games – but that would be a big mistake. The remade versions for the Game Boy Advance are superior experiences, thanks to improved creature balance and additional features, as well as the obvious graphical upgrade. You might not find many players to trade with these days, but it doesn't matter too much – you can preserve your GBA Pokémon by transferring them to the later Nintendo DS games, and onwards to the 3DS games, meaning that anything you catch still has value.




## WonderSwan



■ Launching a black-and-white handheld five months after the Game Boy Color launched may seem foolish, however, a low price and some strong licensed software kept Gunpei Yokoi's last piece of hardware in the running for over a year and a half until its successor emerged. While the WonderSwan never carved out more than a small share of the market, it did have some excellent qualities. 20 hours of battery life off a single battery was superb, and the ability to run games in vertical orientation was cool. With over 100 titles on offer including backwards-compatible WonderSwan Color games, it was well supported. Unfortunately, the tech was dated on arrival and the screen was highly prone to blurring.

**BATTERY LIFE**
20 hours off a single battery? That's pretty incredible

**ERGONOMICS**
Nice to hold, but the rear battery bulge is awkward

**SUPPORT**
Lots of games, but the successor arrived in under two years

**TECH**
Nice hardware, but black-and-white visuals in 1999?

**IMPACT**
Established itself as a credible Game Boy alternative, but only in Japan

**SCREEN**
Widescreen is nice, but there's blurring

## Neo-Geo Pocket Color

■ SNK couldn't seem to catch a break with its own console. Replacing the black-and-white version mere months into its life, this colour variant is, like SNK's other systems, something of a cult favourite. That's probably because pretty much every major SNK franchise is represented here, and rather well – third-party support wasn't awful either, with Sonic and Pac-Man showing up alongside the first-party titles. With its great battery life and satisfying clicky control stick, it's easy to see how devotees fell in love with this, and hard to see how the world didn't, aside from Nintendo's obvious chokehold on the market.

**BATTERY LIFE**
Makes wonderfully frugal use of two AAs

**ERGONOMICS**
Looks boxy, but smart rear design means it sits nicely in hands

**SUPPORT**
First-party games everywhere, but not a great deal else

**TECH**
A lovely piece of kit, although quickly left behind

**IMPACT**
Didn't leave much of a mark on the bigger picture

**SCREEN**
Unlit, sure, but it's crisp and clean all the same

# Game Boy Advance





**It's said that the flame that burns twice as bright burns half as long, and the GBA may be proof of that.** The DS arrived just three years and eight months after the GBA, making it Nintendo's shortest-lived handheld – but with three major models, a library of hundreds of games, it's easy to forget that fact.

It's also easy to forget just how much of a shock the machine itself was when it was unveiled. For the first time in over a decade, Nintendo had altered the form factor of its handheld, with the controls placed either side of the screen, rather than below it. And while the idea of a handheld without a rechargeable battery or an illuminated screen seems ludicrous today, the GBA lacked both in its initial form. The SP model added both features in 2003, as well as a clamshell design. The final revision, the miniscule Game Boy Micro, kept these features but dropped backwards compatibility with older Game Boy cartridges.

But if Nintendo never quite found the perfect form for the GBA, it didn't matter – the 32-bit tech under the hood was capable of delivering fantastic games, and developers capitalised on that. Portable versions of SNES hits such as *Super Mario World* and *Donkey Kong Country* gave nostalgic gamers plenty to love, alongside a new generation of classics like *The Legend Of Zelda: The Minish Cap, Metroid Fusion* and *Wario Ware Inc.*. Third-party developers were on fire, too – the likes of *Astro Boy, Golden Sun* and *Ninja Cop* provided original properties to love. A line-up like that is going to deliver fun, no matter which device you prefer to use.



**BATTERY LIFE**
Not super long, but rechargeable models added value

**ERGONOMICS**
No model was perfect, but you've got options

**SUPPORT**
Hundreds of games over five years

**TECH**
A big upgrade over its predecessor and competitors

**IMPACT**
Inspired a brief, but satisfying, 2D renaissance

**SCREEN**
Anywhere between poor and incredible, depending on model



## Jim Bagley

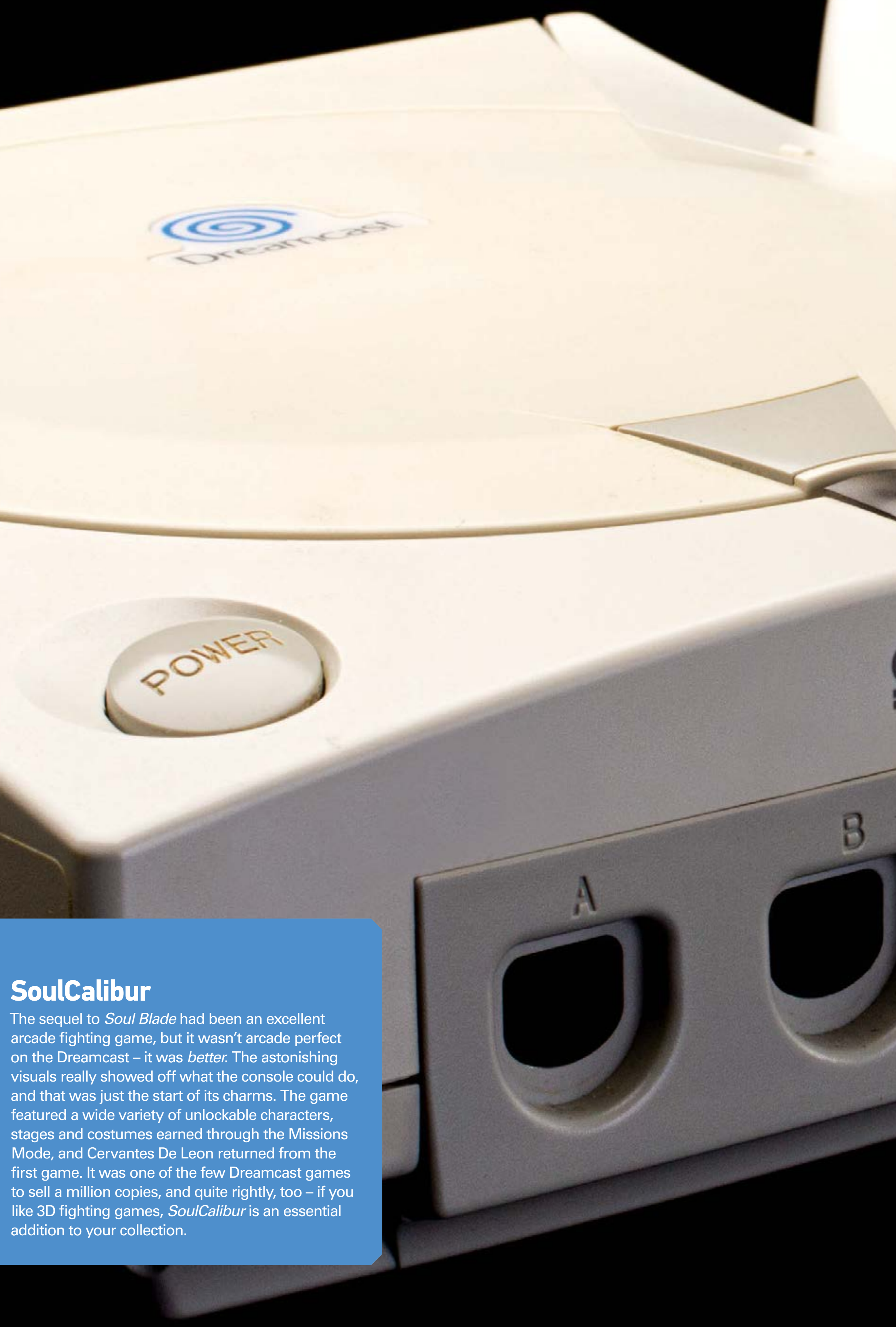
### The veteran coder explains the technicalities of working on the Game Boy Advance

**Many described the GBA as a portable SNES. Is it a fair assumption to make?**
Yes and no. It is a fair assumption to say that the GBA was like a SNES in the video modes it had, but it was way more [than that] as its processor was more capable, it had multiple screen map layers and alpha transparency as well as many hardware sprites.

**What was the GBA like from a technical point of view?**
The GBA was awesome, I loved programming on it. It was also getting towards the tail end of writing routines in assembler to get the all important performance boost, which, to me, is the fun part, as you're having to optimise your tight render routines to get the most out of things. This was before the bigger and more powerful processors came into play, with the extra 3D hardware. Not that it's the end of being able to add assembler, but it's not needed as much lately, and, from a technical point of view, it had many 2D graphic modes, like the SNES, but with the extra processing power you could draw bigger sprites and move a lot more around on screen than you could with a SNES.

**Which model of GBA is your favourite and why?**
The original GBA was my favourite model, because it felt better in your hands, and it was the original one. Okay, it wasn't backlit or anything, but it was the first GBA and it was a huge improvement over the Game Boy Color. You now had something that could out perform like a SNES in your hand, it even had a bitmap mode, and was fast enough to do software polygons.

# Hardware Heaven




## EDITOR'S CHOICE




### SoulCalibur

The sequel to *Soul Blade* had been an excellent arcade fighting game, but it wasn't arcade perfect on the Dreamcast – it was *better*. The astonishing visuals really showed off what the console could do, and that was just the start of its charms. The game featured a wide variety of unlockable characters, stages and costumes earned through the Missions Mode, and Cervantes De Leon returned from the first game. It was one of the few Dreamcast games to sell a million copies, and quite rightly, too – if you like 3D fighting games, *SoulCalibur* is an essential addition to your collection.







## Dreamcast fact

■ Despite the Dreamcast's discontinuation in 2001, software support lasted much longer – Sega's last release arrived in 2004, the last official third-party release was in 2007 and unofficial releases continue today.

| |
|---|
| **RAM:** 16MB MAIN, 8MB VIDEO, 2MB AUDIO |
| **PROCESSOR:** HITACHI SH4 (200 MHZ) |
| **GRAPHICS:** NEC POWER VR 2 (3 MILLION POLYGONS PER SECOND) |
| **AUDIO:** 32-BIT YAMAHA AICA (64 CHANNEL ADPCM/MIDI) |
| **OPERATING SYSTEM:** 2MB DREAMCAST BIOS ROM / MICROSOFT WINDOWS CE |
| **GRAPHICS:** GD-ROM (1GB CAPACITY, 12X SPEED) |

# Dreamcast

» **MANUFACTURER:** Sega » **YEAR:** 1998 » **COST:** £199 (launch), £20+ (today)

If your back's up against the wall you need to pull off something spectacular, and in hardware terms, Sega pulled that off with its successor to the Saturn. The Dreamcast was everything its failed predecessor hadn't been – the sleek white box was aesthetically pleasing, the internal hardware was both powerful and easy to develop for, and the price was attractive. For PAL gamers, the capability to output a 60Hz signal brought an end to years of second-rate releases. Multiplayer fans were well catered for, too, with four controller ports and a built-in modem for online gaming (so long as you were willing to pay the phone bill for dial-up access).

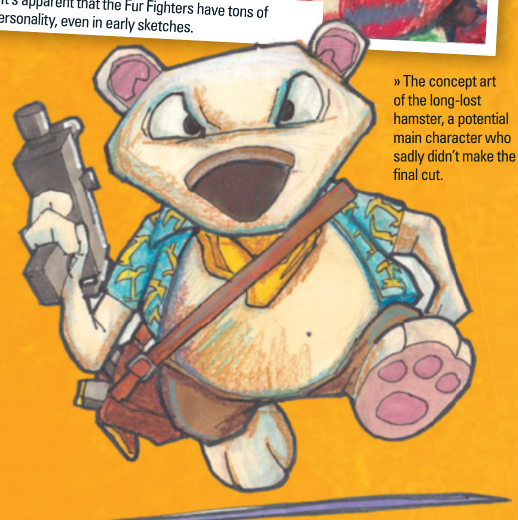
Thanks to its past woes, Sega didn't have the financial ability to drop the console's price when it desperately needed to. This was compounded by a lack of third-party support, the impending launch of the PlayStation 2 and the discovery of an exploit which allowed easy piracy without a mod chip.

Dreamcast production ended in March 2001, and Sega left the console hardware market. Machines are relatively easy to find today, though certain faults are pretty common including random resets caused by power supply problems, and controller port malfunctions due to faulty resistors.

# FUR FIG



» It's apparent that the Fur Fighters have tons of personality, even in early sketches.



» The concept art of the long-lost hamster, a potential main character who sadly didn't make the final cut.

## Back when many studios were coding peaceable heroes, Bizarre Creations was striving to outfit its creations with immense firepower. Mitch Wallace talks fluff with the Fur Fighters team

**Like many creative works, videogames are born in all manner of unique and sometimes serendipitous ways, and often the spark of inspiration ignites in the most unlikely of circumstances.** For Liverpool-based Bizarre Creations, those seeds of innovation were resting dormant within the shelved remnants of several previously-abandoned projects. Back in 1997, the talented, yet notably small, team had found success with a pair of racing titles for PlayStation and PC. It was during this time that some of the studio's cast-asides began to coalesce into something new.

"I'd just finished working on the *Formula 1* games," says *Fur Fighters*' lead programmer and game designer Mark Craig. "But before that, Bizarre Creations had wanted to do a combat game. It started out as something different [to] *Fur Fighters*. You played as a character in a vehicle, sort of on rails. We got far and had a demo on the Playstation, but things changed."




» [Dreamcast] The draw distance, even in the game's larger, open areas, is quite commendable.

Another bit of inspiration would manifest after Capcom, attracted by Bizarre Creation's driving simulator pedigree, approached the team with an interesting proposition. "Because we'd had this great success with *Formula 1*, we got courted by a wide range of people to do racing games" says concept artist and game designer Jeff Lewis. "Capcom came to us with an idea for a cutesy game with driving elements."

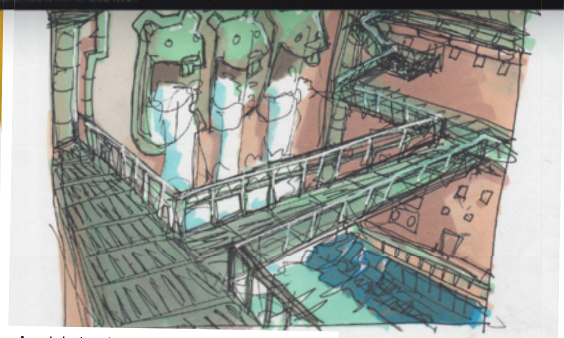
"The demo we did was a karting game with some of Capcom's *Puzzle Fighter* characters," Mark adds. "We did a playable demo with two characters, which was just racing around a track against AI, but the prototype didn't go any further. It was a mental shift for us though, and we kind of stayed in that cutesy zone. Then that made us think that maybe there was something missing from our [previous] shooting game, and we could try to add a kind of cute element to it. That was the thing that made it all happen."

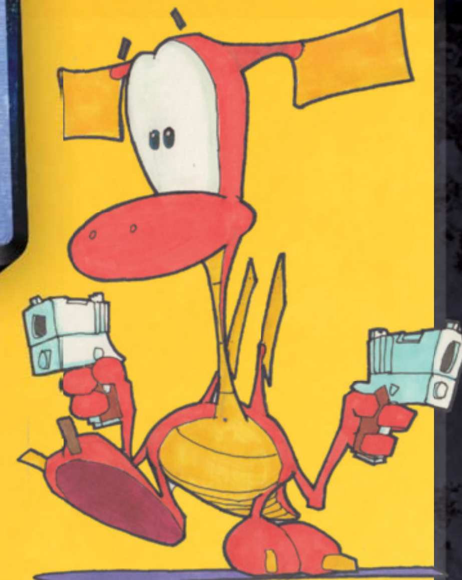
And it wasn't only unused assets and builds that helped shaped the new game. A fellow UK studio was beginning to pump out its own brand of magic on the Nintendo 64, and it was difficult not to be impressed. "We really got into Rare games at that point," Mark recalls. "We played *Banjo-Kazooie* on import before it was out in the UK and really wanted to do that sort of game. But we wanted our game to be a bit more violent, sort of visceral, and use fluff instead of blood, so it was a bit of an antidote to the cuteness."





A concept painting depicting a forest theme, complete with a character armed and ready.


» A early look at the planning stage of Beaver Dam area.


» An early sketch of Tweek, the young dragon in search of his kidnapped mother.

"We didn't want it to have a sense of being for very young children," Jeff elaborates. "*Banjo-Kazooie* certainly is a game that a five-year-old [child] could play. Not that there is anything particularly offensive or strong in *Fur Fighters*, but we just wanted it to feel like more of an adventure and have more of an action slant."

Rare's influence on the design was strong, but several older games played a part in shaping *Fur Fighters*' mechanics. "One of them was a game called *Fury Of The Furries*," Mark says. "It was *The Lost Vikings* as well, and also *Wonder Boy III: The Dragon's Trap*. All of these games had the idea of different characters that had different abilities, and the purpose of each area was utilising each character and switching between them."

But if the idea were to go anywhere, it would have to be pitched to publishers. And pitching would require having something to show. "We made a quick demo," Mark recalls. "We played it and thought it was hilarious; shooting these teddy bears and fluff was coming out instead of blood. It gained momentum from there." Jeff remembers how things began to take shape. "I think it was just one meeting where it suddenly snowballed into 'let's try this'," he says. "We had quite a large toolset from the previous demos we'd done, so we were able to start putting something together very rapidly."

Psygnosis, which had published the *Formula 1* games, ended up not being interested in the new project. However Sega, which was publishing Bizarre's very own *Metropolis Street Racer*, was in the running for a time, as was 20th Century Fox. In the end, it was Acclaim that not only saw potential in the title but also put down the best offer.



» [Dreamcast] There's no silly bog-standard deathmatch here. Only the 'Fluffmatch', and the four-player mode runs brilliantly.

If there was anything that showed off the potential of *Fur Fighters* (or *Furballs* as it was originally titled), it was its cast of heroes. Jeff was responsible for devising an entire team of animal warriors for players to choose from: Roofus The Hound, Tweek The Dragon, Rico The Rockhopper Penguin, Chang The Firefox, Juliette The Cat, and Bungalow The Kangaroo.

"I was just basically given free reign to come up with a bunch of characters," Jeff remembers. "I spent a

**"I was just basically given free reign to come up with a bunch of characters"**
Jeff Lewis



## IN THE KNOW

- » **PUBLISHER:** ACCLAIM
- » **DEVELOPER:** BIZARRE CREATIONS
- » **RELEASED:** 2000
- » **PLATFORM:** DREAMCAST, PC, PS2
- » **GENRE:** ACTION

# Q&A: ALEX WARD



## The ex-Acclaim industry veteran reveals why the firm picked up Bizarre's shooter

**What was your role at Acclaim?**

I joined Acclaim Entertainment in Knightsbridge, London, and worked there from 1995-1999. I started off giving out the cheats for *Mortal Kombat* and *NBA Jam*, then moved into marketing and did all sorts of different things, including coin-ops and helping with PR. From the end of 1997 to 1999 I worked in an A&R role scouting Europe, meeting developers and looking for games we could sign and distribute.

**What caught your eye about *Fur Fighters*?**

Bizarre Creations was simply the top UK developer in my eyes. I was and still am a huge fan of all of their games. I saw *Fur Fighters* in *Famitsu* and also some great spoof press copy about a title called '*Grow Your Own Vegetables*'. That sort of stuff was right up my street, so I made contact with the studio. They were doing *MSR* for Sega Europe and I was also following that one really closely.

**What was it like signing on Bizarre Creations for publishing *Fur Fighters*?**

It's a time I look back on really fondly. I was travelling to Japan to the Tokyo Game Show and thought *Fur Fighters* could also appeal to the Japanese audience. The game was already quite polished and slick on Dreamcast and PC. I was instrumental in presenting the game at our New York headquarters with Jeff Lewis and getting the entire European team up to Liverpool to meet the team and get involved early on with the game.

**Any *Fur Fighters* anecdotes from development or PR and marketing?**

To this day I'm disappointed that Acclaim's lawyers advised the name be changed from *Furballs* to *Fur Fighters*. Furball was a minor character somewhere in the Warner Brothers stable. I think we should have stuck to our guns on that one. *Furballs* is how I remember the game. There was a good night out where Martyn Chudley [BC studio founder] schooled me at *Sega Rally 2*. But then he was friends with Mizuguchi-san, so he'd obviously picked up some quality tips. I also remember wandering the streets of Liverpool at midnight trying to get a UK launch Dreamcast for Nick Wiswell [BC audio manager] and not finding a single shop open.

**How do you look back your time getting *Fur Fighters* published?**

My brief time with the Bizarre Creations crew inspired me to leave the game publishing world behind and move into development myself. Before *Fur Fighters* launched, I quit my job and joined Criterion at the end of 1999. I started development on what became *Burnout* a month later. The team were kind enough to send me a signed copy of the final Dreamcast game, and I will always treasure it.






These behind-the-scenes panels illustrate a handful of preliminary level ideas.

happy three or four days drawing away, and we sort of looked at [the sketches] and said, 'Well, that one's a dog – what could he do? He could dig. That one's a cat – what could she do? She could climb.' And it was all sort of a natural fit from there. We did pretty much go with the first bunch of characters I came up with, apart from one cool character who was a hamster and another who was a tortoise who didn't make the cut."

The animals were tasked with rescuing their families from the nefarious General Viggo, a giant white cat that kept a tiny, bald human as a pet. "The fact that we've got [that in the game] is a direct *James Bond* reference, but sort of in reverse," Mark says.

The story would develop into a rambunctious rescue mission filled with clever banter and plenty of cheeky nods. "We never had a professional writer helping us until quite later on," Jeff admits. "A guy from Acclaim came in and helped us polish the dialogue. *Austin Powers* was out at that point, and we all loved *James Bond*, so we thought it would be fun to give it this *James Bond* twist. Having loads of movie and cultural references came from the fact that *Family Guy* had started on TV around that time."

A sizeable main hub anchored the game world, opening up into a variety of different locales and levels as players progressed through the game. "I drew pictures of things that interested me within the real world," Jeff says, citing the origins of his environmental concept art. "Transportation, cities, archaeology, and movie references. I ended up with a series of paintings, one of each theme, and that kind of got people's imaginations going. I was doing a lot of world travelling, and a lot of the environments came out of the places I'd been. Most of the New York-themed levels came out of a trip I went on after finishing university."



» [Dreamcast] Some areas contain fun background NPCs, not unlike these hopping, wide-eyed fawns.



» [Dreamcast] The Fur Fighters find themselves inside Dinotropolis, suddenly miniaturised at the feet of massive reptiles.

## "I think I worked 36 hours straight once. Nobody asked us to work late, but we did"

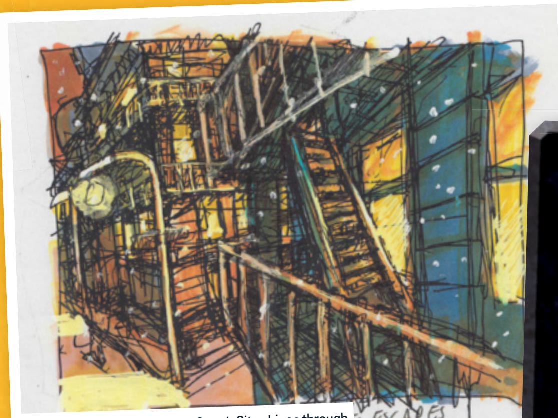
Mark Craig

In the early stages, *Fur Fighters* was being developed on PC, but Sega's forthcoming Dreamcast was just around the corner. Its processing power was formidable, but the software migration was far from straightforward. "While we were making the game, the Dreamcast was still in development," Mark says. "We started on early dev kits that didn't have final hardware. One [of them] didn't have the final graphics chip or processor."

According to Mark, though, the Dreamcast was, a solid system to develop for. "The graphics chip was really good," he says. "We had long view distances with low polygons, so we could have large levels where you could see quite far. [It] also had compressed textures, so we could get a lot of them into the game."

*Fur Fighters* included a *GoldenEye 007*-inspired four-player option in the Dreamcast and PS2 versions, and even online multiplayer for the PC port. Given the Dreamcast's pioneering 56K internet connectivity, it comes as a surprise that there wasn't SegaNet support. Mark explains the omission: "Sega were quite funny and held back on a lot of its tech," he remembers. "They wouldn't give it to developers until they had released something with it. I don't think we had access to all the stuff that they had."

Support for Dreamcast's VMU was planned but also scrapped. "Once we got hold of the unit, we found it wasn't very powerful at all. There was a plan at one point to get some of those minigames from the characters' [homeworld] houses onto the VMU, but the resolution and the power of the CPU was very poor."




» The mood and tone of New Quack City shines through in these rough draft renderings.

After a two-year stretch, development on *Fur Fighters* came to a close and the team worked up until the last minute. "We had this crunch towards the end," Mark says. "It was the last night we could work on the game, because we had to ship it the next day. I worked opposite Jeff and I said, 'Jeff, you know tomorrow's our last day,' and he was like, 'Yes I do Mark,' and I was like, 'Well, do you know that this level's not textured at all?' Jeff said to me, 'It's okay Mark. I'm going to texture it.' And I thought, 'Oh, that's good,' and I carried on. Then I looked up and he was fast asleep at his desk! I didn't know whether or not to wake him up!"

Jeff chuckles and confirms that, yes, he did texture that level. "I think I worked 36 hours straight once," Mark adds. "Nobody asked us to work late, but we did. We just wanted to make the game really good."

Since releasing the iOS reissue of *Fur Fighters*, Mark and Jeff have been receiving kind words about the game, with many fans recounting their gaming sessions. There are even people at their current studio, Lucid Games, that grew up playing *Fur Fighters*, who now work with the main perpetrators. "The really gratifying thing is that, after all these years, people regularly get in touch with us with a 'thanks' about *Fur Fighters*." *

**We'd like to add our thanks to Mark Craig, Jeff Lewis, Nick Wiswell and Alex Ward.**



### DEVELOPER HIGHLIGHTS

**METROPOLIS STREET RACER** (PICTURED)
**SYSTEM:** DREAMCAST
**YEAR:** 2000

**PROJECT GOTHAM RACING**
**SYSTEM:** XBOX
**YEAR:** 2001

**TREASURE PLANET**
**SYSTEM:** VARIOUS
**YEAR:** 2002



» All six heroes of *Fur Fighters* need to be properly utilised in order to complete the game.

## Q&A: NICK WISWELL

Fur Fighters' audio manager weighs in with a sound check

**How was sound design approached at the Bizarre Creations studio?**
At that time, [our studio] didn't have an audio team. The way it worked in the past on the *Formula 1* games is [BC] had an audio programmer who had written the basic playback mechanisms, but the publisher, Psygnosis, had provided most of the sound effects. Bizarre was looking for a similar deal for *Fur Fighters*, and Acclaim's London studio had a fairly large audio team.

**What was your creative angle for the *Fur Fighters* soundtrack?**
We wanted each of the worlds in the game to have a main theme, and on top of that we wanted a different remix of the theme for each of the characters that would change accordingly. For example, in New Quack City, we had a funk/rap score, but Roofus added some Scottish instrumentation, Tweek had some Welsh choir, Bungalow added some didgeridoo and Rico had a Latin flavour. Each of the characters had their own personalities and backgrounds, and we tried to capture some of that in the score.

**How much material was recorded?**
We ended up with a pretty massive score. I believe it came in at over two hours of music for the original Dreamcast version. When it came to the PS2 version, we actually had a load of extra tracks, which took us over the three hour mark.

**Were real instruments used?**
Even though none of it was recorded with live orchestra, there were some great orchestral pieces for the later Viggo levels that were very *Bond*-esque. There was also some very good live guitar work from the guys at Acclaim. Back then having any live instruments at all was pretty rare. Most music was synthesised.

**How long did each track take to finish?**
There weren't a huge amount of revisions done, and Acclaim nailed the tone quickly. The only track I remember doing several iterations on was the attract demo song. We had been playing a lot of *Soul Edge* and *SoulCalibur*, and we loved the fact that there was a cool song with lots of video cuts and edits. It's subtle, but if you listen to the song on its own, you can tell which characters are on the screen just by the instrumentation.

**Any interesting anecdotes from development?**
The menu theme was actually inspired by a track from Aphex Twin called *Analogue Bubblebath*. Also, the voice of Rico The Penguin in the Dreamcast version is Jon St. John (the voice of Duke Nukem).

**And how do you look back at *Fur Fighters* now?**
It was the first game I ever worked on, so it's a really personal game for me. I absolutely adore it.



> "It's not just about commercial success. I want to make games I'm proud of"
> Gregg Tavares

In the chair with...

# GREGG TAVARES

## From the C64 to the Xbox 360 and beyond, Gregg Tavares has been coding videogames for over three decades. He tells Paul Drury about flying lizards and naughty dogs

**He really doesn't look old enough but Gregg Tavares has been programming games for over 30 years, in both America and Japan. His videogaming CV covers an amazingly broad range of genres, from arcade shoot-'em-ups to strategy titles and 3D platformers. Having become fluent in Japanese, Gregg is currently planning to move back East, though we caught up with him via video call during his recent visit to Berlin. What was he doing in Europe, we asked? "Wasting time," he grinned. "There's a lot of games stuff going on in Berlin, game museums and a large indie game community. I'm trying to work out what to do next." Whatever it is, we shall watch with interest…**




» [Atari 8-bit] *Leaps And Bounds* was an educational game that Gregg worked on with *Castle Wolfenstein*'s Silas Warner.

**We remember playing your version of *Centipede* on the C64 in 1983. You were a teenager and hadn't written a game before so how did you land a big name arcade conversion like that?**
Luck! I was 18 and was due to graduate from high school. My dad said, 'Gregg, I saw this ad on the bulletin board at work for programmers. Shall we call it?' I guess he was worried about what I was going to do next. Turned out to be a guy wanting someone to port *Centipede* from the Atari 800 to the C64. He gave me a chance. Maybe he was desperate.

**So you had a C64, then?**
No, he loaned me one. I was an Atari guy! The Atari 800 and Commodore 64 use the same processor, though I still had to do stuff with the graphics and sound. I'd learnt [to code] assembler from books but I was no expert. If you look at my code for *Centipede*, it's pretty awful but it was my first game and it worked.

**This must have led to you taking on another major conversion for the C64, *Mario Bros.*.**
Yeah, but I failed on this one. When Mario jumps into the platform above him, he's supposed to leave a lump and I couldn't figure out how to do that. I got the game working but that was enough for them not to ship it. I think Ocean did a version a few years later…

**Did you still get paid?**
For *Centipede*, I got $3,000 though I'm sure it made them millions of dollars. *Mario* paid $10,000 and I was like, 'Wow, three times as much!' I was studying programming at college but only for a year before I ran away with my first girlfriend.

**How romantic!**
I was in Los Angeles, she was in Seattle and her friend said, 'Come to Baltimore, my mom can rent you somewhere cheap.' That same mom said they needed programmers at a place called Muse.

**Ah, the home of the original *Castle Wolfenstein*.**
It was a pretty small company of about 15 people in this four-storey building in Baltimore, with shipping in the basement. They did everything themselves. There were four programmers – me, Silas Warner, Eric Ace and Ed Zaron, the president – and it was kind of like a family. We'd meet every Friday and discuss what we should do and what was cool in the world.

**You worked on educational title Leaps and Bounds with Silas Warner, the author of *Castle Wolfenstein*. What was he like?**
He was a huge man. Six foot seven inches tall and 350 pounds. Silas was very… what's the word? Weird. The first day I met him, they took me into his office and pointed to this large cake container on top of the filing cabinet. You could see something gross was inside and had been there for years. They said, 'We know something weird is in there but we're not opening it to find out.' I learnt a lot of techniques looking at his code.

**Hopefully no cake recipes, though. You left Muse shortly before it folded in 1985 for MicroProse. Was it a very different place to work?**
They had 30 people when I got there but it still had a homely feel. It had been founded by Sid Meier, who was the programmer, and Bill Stealey, who was the businessman but he was still a real gamer. Near the end of a project, he'd play the game and if it wasn't fun for him, it wouldn't ship. That was very different from companies I worked for later where the guy at the top didn't care about what they were selling. I liked that part of MicroProse and we had some nice times.

## SELECTED TIMELINE

**GAMES**

- **CENTIPEDE** [C64] 1983
- **MARIO BROS.** [C64] 1984
- **LEAPS AND BOUNDS** [Atari 800/C64] 1985
- **CONFLICT IN VIETNAM** [Atari 800] 1986
- **GUNSHIP** [C64/PC/Amiga/ST] 1987
- **STREET SPORTS BASKETBALL** [Amiga] 1988
- **LORDS OF THE RISING SUN** [Amiga] 1989
- **FUTURE CLASSICS** [PC/Amiga] 1990
- **M.C. KIDS** [NES] 1992
- **TERMINATOR VS. ROBOCOP** [NES] 1992 [Unreleased]
- **GEX** [3DO] 1995
- **DISRUPTOR** [M2] 1995 [Unreleased]
- **MAXIMUM GAUGE** [PlayStation/PC] 1996 [Unreleased]
- **ZOMBIE REVENGE** [Arcade] 1999
- **CRASH TEAM RACING** [Playstation] 1999
- **JAK & DAXTER** [PS2] 2001
- **LOCOROCO** [PSP] 2006
- **AFRO SAMURAI** [Xbox 360/PS3] 2009



» [C64] Gregg coded *Gunship* for the Commodore 64 alongside Andy Hollis and a certain Sid Meier…




» [Amiga] Gregg worked on two Amiga games. One was Cinemaware's *Lords Of The Rising Sun*, the other was *Street Sports Basketball* for Epyx.

**You worked on both *Conflict In Vietnam* and *Gunship* while you were there. What was your involvement with those games?**
With *Vietnam*, Sid had written a wargame simulator and then handed it off to Ed Bever, who had a PhD in history, and he filled it with all the data to make the battles go the way they should. All I did with that one was make the game fit on a cassette. For *Gunship*, I worked a lot on both the C64 and Amiga versions, like making the missiles fly, doing the cockpit and all the screens that set up your mission. Ask any game developer and they think that bit will be easy and it turns out to be six times a much work as you thought…

**Was working on the Amiga a big step up?**
It was super exciting. The Amiga was the first machine that could get anywhere near to real-time 3D. I remember Sid [Meier] getting a flight sim demo running at about thirty frames a second which was, like, amazing. *Gunship* ran at around three frames a second, and that was pretty good at the time.

**You leave Microprose and in 1988 produce two very different games, *Street Sports Basketball* and *Lords Of The Rising Sun*, both for the Amiga.**
I got a contract from the same guy that gave me *Centipede* to port *Street Sports Basketball*. It was a horrible game but I got it done. *Lords Of The Rising Sun* was for Cinemaware and they definitely changed the industry. Before them, games looked like *Pac-Man*, these simple abstract graphics, and then Cinemaware took it to full-screen game art. That was exciting but working there, they had a lot of problems. The lead programmer wanted to work nights so we ended up working 8pm to 4am or something. For some reason, he felt threatened by me. I'd get some battle code done fast and he'd be like, 'I bet my code is better'. I'd be like, 'Whatever, dude.'

**You then work on *Future Classics* (1990) for the PC and Amiga, a mishmash of five different styles. Did you think variety would be the spice of life?**
That was a contract from a guy that had left Cinemaware and his dad had funded him to make this game. Me and my roommates at the time got together and built a tool called tUME, which stood for 'The Ultimate Map Editor' and we used that to make the maps for the different games. We ended up selling that as a commercial product and it ended up being used in 90 or 100 games throughout the industry.

**Any we might have heard of?**
The most famous ones were pretty much all of David Perry's games for the 16-bit machines like *Aladdin* and *Cool Spot* and the first *Earthworm Jim*. We licensed it to SN Systems who later became Psygnosis and they'd sell it with their dev kits. Yeah, I'm very proud of that.

**It's interesting your tool was used to make console games because you move into NES development shortly afterwards with *M.C. Kids* (1991). Did Nintendo have much involvement it?**
There was some quality assurance but that's a good thing, right? Get someone to play your game and find the bugs! The biggest issue we had with Nintendo is that they didn't interfere until the end and then sent us a letter that basically said *M.C. Kids* was a rip-off of *Mario*. They said we had to agree to only ship it for Nintendo. Apparently Virgin had an agreement with Sega that said, 'If you ship something for Nintendo you






» [3DO] *Gex* was Gregg's first CD-ROM title.

> "The players don't see what you imagined, they see what you gave them. What you imagined is always so much better." Gregg Tavares



have to ship something for us.' That put the fire on Virgin to have a game ready, so they hired David Perry and said, 'Make us a game really quick!' And that game was *Global Gladiators*.

**That would explain the similarities between those games! Did you have any qualms producing a game based on a multinational junk food chain?**

At the time, no. In fact, the McDonalds people asked us not to put any food in the game! They told us they sold a million Happy Meals a day and they were going to do an *M.C. Kids*-themed happy meal for a month. We were like, 'Yes! There's no way this isn't going to be a hit!' But they never followed through with that... maybe they thought the game wasn't good enough.

**Did your team have an discussion about choosing two lead characters of different ethnicities?**

Things seemed to be getting more integrated at the time and it just seemed a natural thing to include.

**Your next NES game was also a licensed title, this time *Terminator Vs. Robocop*. Were you a big fan of the films?**

I was a huge fan of both movies but I didn't know anything about the comic books. We made that on the NES when the SNES had already come out and it's no fun to work on the last platform. The artists hated it because their friends were getting to make far more beautiful graphics on the SNES and we were stuck using this old system. There was a lot of pain in the project in that sense. And it never shipped.

**Were you very disappointed?**

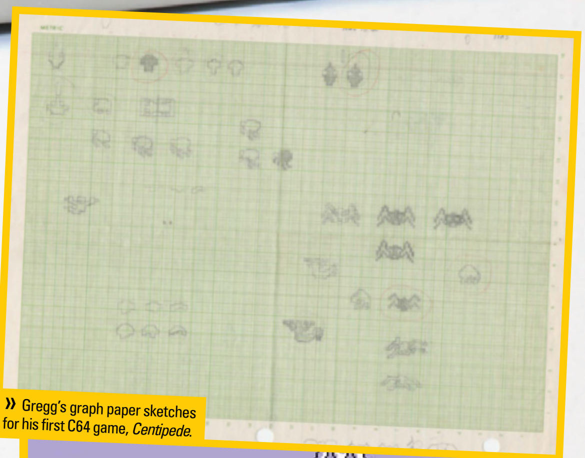
Probably not. I've seen it on YouTube, so somehow it got out. It was the first game I worked on where we'd spent all this time making stuff, the graphics and the look of it, and then it got shown to the licence holder and they went, 'No, no, no!' That was the producer's fault… we should have just done sketches and got them approved. That's something I learned – if you're doing a licence, communicate with the licence holder before you do any work!

**You moved from old hardware to CD-ROM technology with your next game, *Gex* (1993) for the new 3DO console. Did it feel like you were now back on the cutting edge?**

Sure! It did feel that way. It was exciting but a huge learning experience, for me and the whole company. Crystal Dynamics had been used to making cartridge games and they have limits, which kind of determines how much effort you can put into a game. Those limits largely go away when you go from a 1MB cartridge to a CD of 650MB. The schedules ballooned and nobody was prepared for that. The company thought the game would take nine months to make and it took double that.

**Were you worried it wouldn't get finished?**

Well, I tried to get the project cancelled [laughs]. If you play most 16-bit platform games, they run at 50 or 60 frames per second. They look smooth. Do it at 30 frames and it stutters. The 3DO didn't have the power to do a 2D platform game at 60 frames unless you seriously limit the colours and then it doesn't look any better than a SNES game. When I worked that out, I said, 'This isn't the right project for this platform!' ▶



» Gregg's graph paper sketches for his first C64 game, *Centipede*.




» [NES] *M.C. Kids* is a fun platformer based on the McDonalds brand.



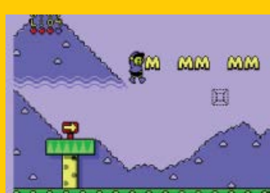
# FIVE TO PLAY

## Five of Gregg's games to sink your teeth into



### CENTIPEDE 1983

■ Gregg's first published game was a solid conversion of the Atari coin-op and came out on cartridge as an early C64 release. It was made when he was just 18 years old. The action is pretty zippy and though a joystick is no substitute for a trackball, this was a fine coding debut for Gregg.



### M.C. KIDS 1991

■ The McDonalds licence shouldn't put you off – this is a decent platformer with an emphasis on exploration and not an artery-clogging burger in sight. Chucking blocks at foes gives it a nice combative feel, reminiscent of *Super Mario Bros. 2*, and co-op play provides much spring-heeled fun.



### ZOMBIE REVENGE 1998

■ *The House Of The Dead* reimagined as a scrolling 3D beat-'em-up. Though you can pick up guns to dispose of the undead, punching them into body parts is more entertaining. Gregg worked on the coin-op but the Dreamcast port is easier to source.



### CRASH TEAM RACING 1999

■ Sticking a popular platforming character in a go-kart is hardly original but it's seldom been done with such panache. If any karting game is going to worry Mario, it's probably this excellent take on the genre, the final *Crash Bandicoot* game coded by Naughty Dog.



### LOCOROCO 2005

■ If you dreamed that singing space hoppers had invaded Wonderland, you might think you would have eaten too much cheese before bedtime. What you should actually do is make it into a gloriously surreal PSP game, perfectly suited to the handheld. Roll with it.







# YOU ASK THE QUESTIONS

## Gregg goes loco on your questions

**NORTHWAY: Did you do any partying at Atari?**

I was 18 and I hadn't a clue what was going on. I got the contract through another company who had a deal with Atarisoft, though when I was doing *Mario Bros.* I did get flown to Atari once. I had dinner with them and I had my first fried bananas for dessert. Considering how much I got paid and how much they made from *Centipede*, were they taking advantage of me? I've no idea.

**MEGAMIXER: Does it feel good to know that a lot of people see *Crash Team Racing* as a *Mario Kart* beater?**

[Laughs] of course I love hearing that! That's the game I probably have the most fun playing. We played it all the time while we were making it. It helped us tune the game and we had a blast. It was clearly a rip-off of *Mario Kart* but, you know, there are a thousand platform games out there!

**MERMAN: Did you expect Sony's PlayStation hardware to become dominant when it was announced?**

I think if you'd asked me back then, I'd tell you they didn't know what they were doing. Sega and Nintendo were at the top… but then Sega made the Saturn which has some great games but it's pretty horrible hardware. Inside, it's a mess.

**PARANOID MARVIN: What was your favourite version of *Gunship*?**

I read a review [saying], 'I came over a ridge and guys started shooting so I went behind a mountain and pulled out the other side…' I'm like, 'Woah!' because I know enemies aren't checking mountains. These guys were imagining that the Vietcong were waiting for them.

**You must have been overruled, though.**
I was frustrated with it but *Gex* turned out an okay game, I guess. Something I've learned through my career is that your vision of the game is never what actually makes it out. You have to remember the people that play it don't see what you imagined, they see what you gave them. And what you gave them is probably good enough. It's just that what you imagined it to be was so much better. You're seeing it as 70 per cent of what your dream was but they're seeing it as 100 per cent of what they got.

**Sadly, your next two projects don't get seen by any players. What happened to *Disruptor* for the unreleased Panasonic M2?**
We hadn't gotten that far. We had animated characters, very compressed, because that system only had 2MB of RAM, which limits what you can do with textures, and we had some levels up which you could move the camera through but that was about it. The M2 had some serious technical issues that made it really hard to get any speed out of it. Insomniac did a PlayStation version which was pretty much the same game.

**And what about *Maximum Gauge*?**
When *Disruptor* was cancelled, four of us set up a new company called *Big Grub* and our goal was to make a game as pretty as *Diablo* but that played like *Zelda*. It had a sci-fi setting and we got it working but we really didn't really know what we were doing at the time. We were excited about it, sure, but in hindsight we should have picked something smaller.





» [NES] The unreleased *Robocop Vs. Terminator.* According to Greg, we're not missing out on much.

**Your career then takes a different direction when you get to work on the Sega coin-op, *Zombie Revenge*. Having worked on several arcade conversions earlier in your career, how did it feel to be working on an actual arcade title?**
I was totally excited! Finally, I was working in the real games industry. Back then, the arcade was where you had the cool experience before you came home and played the crappy port. That changed of course, probably a few years after I started on *Zombie Revenge*, but at the time, arcade was still number one.

**Did you move to Japan for this?**
I did, though I'd really moved there to learn Japanese and to do that, I needed a job. When I was at Crystal Dynamics, I met Mark Cerny who speaks fluent Japanese. He was able to negotiate with Sony in Japan to get dev kits for PlayStation before anyone else in America and we were just this rinky-dink little 20-person company. I saw that example and thought, 'Hey, I should learn Japanese!' Mark knew all these people [in the arcade business] and I flew over with him to Sega. He introduced me to the head of the arcade division, who had been his best man at his wedding, and this guy was like, 'Mark says you want a job. Okay, you're in.' I was like, 'Whaaaat?!'

**It's not what you know, it's who you know.**
Yeah, I totally lucked out but I didn't do a bad job, I think.

**Was making games in Japan very different to your previous experience in the USA?**
They were actually very behind on their tech which was weird, because it didn't look like that when you had games like *Daytona* or *Virtua Fighter 3* which were out around then. The division I was in was AM1, which did




» [Arcade] *Zombie Revenge* was originally known as *Blood Bullet: The House Of The Dead Side Story*. Nope, it's not catchy.

> I was totally excited to be making a coin-op. Finally, I was working in the real games industry
> Gregg Tavares




» [PlayStation] Gregg is particularly fond of his work on Sony's first console.

stuff like *House Of The Dead* and they made beautiful games but their tech... like, they had no tools for the artists to make a level. They'd have to write stuff down on graph paper and hand it to a programmer who'd type it in! If you wanted to make a new *Virtua Fighter* character, you handed them a folder and you'd get to see what it looked like the next day. It was insane. We'd been using level editors since the Eighties…

**Did you try to change this situation?**
I built tools to try and make things easier but they do things differently. In the West, a designer would make, like, a 400-page document describing a game but in Japan, they'd kind of make storyboards, like for movies. Very few words but lots of drawings and diagrams with stick figures on, showing how the game flows.

**Why did you end up leaving Japan?**
They work crazy hours, like 10am starts to 11:30pm finishes. So you'd go out to dinner at say 7pm as a team and they'd try to talk to me for, say, five minutes max because my Japanese was still pretty crappy. I'd be programming all day and not really have much conversation. One day I'm walking through Ginza, a famous part of Tokyo, heading to a famous toy store and I pass two guys from Naughty Dog, one who I knew from working at Crystal Dynamics. Yeah, all geeks going to the toy store. He's like, 'Gregg!' and I'm like, 'Steve!' He introduced me to Andy Gavin [cofounder of Naughty Dog], and he gave me a job.

**You worked on *Crash Team Racing* and *Jak And Daxter* and suddenly left. How come?**
I had an argument with the boss. Jason [Rubin – cofounder of Naughty Dog] and I are both very hot headed and I want to say that I think he's one of the fairest bosses I've ever worked for. He can really rub people up the wrong way, though. He decided that for *Jak And Daxter* we weren't going to have flexible working hours anymore. I didn't respect that, I guess. So one Monday, we're due in at 10:30am and I get there at 9am and start working. The next day, I get there at 11:15am and he gets in my face, like, 'You're 45 minutes late!' I'm like, 'Shut the f**k up dude, I was in an hour and half early yesterday.' He called me into his office saying, 'You can't talk to me like that. If this was Gap, you'd be fired.' I said, 'This isn't the Gap dude, we're not in retail.' He wanted to see me again later and I just said, 'Screw this, I'm out of here.' And that was it. I was gone.

**You put some distance between yourself and your former boss by moving back to Japan and working on the wonderful *LocoRoco*.**
I wrote the animation system, the level editor, the system for building the puzzles and the bonus games. I did a visual scripting system for the designers, too, and they really liked like because it let the artists create all the levels themselves without needing another programmer. And I was shocked with all the things they made [with the tools] I gave them. If they wanted a new feature, like say the camera following a spline through a level, I'd create a little demo level [with it in] and say, 'There you go, knock yourself out.' I only got to play the game all the way through when it shipped and I was blown away when I saw what they'd done.

***LocoRoco* and its sequel are favourites of ours. Are you annoyed they didn't reach a wider audience?**
I know the first one wasn't a big hit. It sold 300,000 copies or something worldwide. Yeah, of course I wish it had more success but it wasn't a failure either. It made its money back. If I had to choose, I wouldn't just shoot for commercial success. I just want to make games I'm proud of. But then commercial success does let you choose your next game…



» Greg working on *Crash Team Racing* at Naughty Dog in 1999.

**Would that explain why you ended up on *Afro Samurai* next?**
That game was… interesting. We had high hopes for it but we had a lot of problems and I don't think we found what was fun in that game until about three months before it shipped, at which point it was too late, we didn't have the money to start over and we had to ship what was there. I think that happens to a lot of games.

**After *Afro Samurai*, you moved to Google to work on game engine technology such as *WebGL*. Do you enjoy giving others the tools to make games?**
The last thing I've done is a system called Happyfuntimes, which lets you use your phone as a controller. You're probably thinking that's gross because mobile phone controls suck. What's unique is that if you go to a party, everyone can play the game, not just four people on your Xbox. You can have 100 people playing a game! You could use it to make social games and it's free and open source. I just want to see people doing interesting stuff with it. The sky's the limit! *





RETROREVIVAL

# Inside Outing

## BETTER ON AMSTRAD? OF COURSE IT WAS

» **AMSTRAD** » **THE EDGE SOFTWARE** » **1988**

As much as I loved the Amstrad, owning one didn't always make things easy for me. You'd have to put up with constant poor ports from lazy developers, as well as abuse from so-called friends who thought it was funny to tease you whenever they saw a game that was worse on your machine than it was on theirs. I'd put up with these slights with a certain amount of stoicism, partly because that's my nature, but also because in some cases I knew they were right. Sometimes though, a game would come along that played massively to the Amstrad's strengths and it was those times that I'd gleefully shove that proof in my friends' faces. We all did, right?

*Inside Outing* was one such game. The Amstrad was an absolute powerhouse when it came to creating stunning isometric adventures and *Inside Outing* by The Edge Software was no exception. Brilliantly-designed rooms, gigantic-looking, colourful sprites and smooth movement all combined to create a truly remarkable game that still holds up exceptionally well today. Yes the sound was rubbish, but the gameplay, the gameplay was wonderful. Playing as the thief, Raffles (an alternative name for the game in some locations), you had to search a huge mansion for 12 gems, which had been hidden by the manor's now-deceased owner and are now required by his grieving widow. While some of the diamonds are in easy view, others are deviously hidden away, requiring you to solve clever little puzzles to retrieve them.

It wasn't always easy being an Amstrad owners at times, but when gems like *Inside Outing* appeared it made all the heartache, all that wondering about whether you backed the right console, instantly vanish. Play it now, while laughing in the faces of your C64 and Spectrum-owning mates. *




>> Vanillaware's Odin Sphere is something of a forgotten classic, so it's pleasing to see it getting a second bite at the gaming cherry. We also investigate a game called Pokémon Go that's apparently quite big…




» [PS4] *Leifthrasir* features a number of new mid-bosses to help with all the levelling up.

# Odin Sphere Leifthrasir

## INFORMATION

» **FEATURED SYSTEM:** PS4

» **ALSO AVAILABLE ON:** PS3, PS VITA

» **RELEASED:** OUT NOW

» **PRICE:** £31.99 (VITA) 35.99 (PS3), £39.99 (PS4)

» **PUBLISHER:** NIS AMERICA

» **DEVELOPER:** VANILLAWARE

» **PLAYERS:** 1

## THE PS2 CLASSIC IS NOW BETTER THAN EVER



**The original *Odin Sphere* was first released in 2007 and was instantly well received thanks to its stunning visuals and cleverly-woven plot.** While its 2D sprites were gorgeous to look at, all that visual fidelity came at a price – the gigantic sprites meant a large amount of slowdown, which impacted on gameplay, and the game itself was generally hampered by annoying load times and clunky mechanics. It's incredibly pleasing, then, to see Vanillaware return to its epic RPG and fix practically all of the issues that plagued the original game.

While *Odin Sphere* is ostensibly an RPG with all the trappings you'd expect from the genre, it also pays tribute to the scrolling fighters of old. Your character typically moves on a 2D plane, meting out justice to whatever enemies fall in the way of their dangerous attacks. Initially it takes a while to work out movement, due to the wraparound nature of the stages, but you'll soon get to grips with the system and will quickly appreciate *Odin Sphere*'s many and numerous gameplay mechanics.

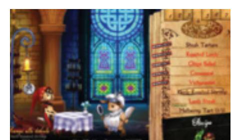
The combat is surprisingly deep for an RPG. Initially, you only have access to a small number of attacks, but as you increase in power you'll unlock a large amount of abilities that can be further enhanced by collecting Phozons. In addition to enhancing your weapon and abilities through Phozon collecting, it's also possible to create powerful potions by combining different items in the Material bottles you can pick up. Antidotes, healing phials, whirlwinds, and noxious clouds of destruction are just a few of the things that can be created and it's possible to make

» [PS4] The imposing bosses used to chug on the PS2 version. Now they run at a delicious 60 fps.





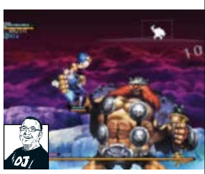




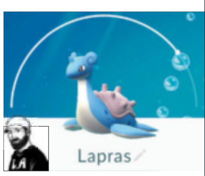
### BRIEF HISTORY

» *Odin Sphere* was originally released by Vanillaware in 2007 and is considered a spiritual successor to the Japanese Saturn game, *Princess Crown*, which several of the staff worked on. Although it was originally completed in 2006, its release was held back to avoid clashing with *Shin Megami Tensei: Persona 3*, which was also published by Atlus. It wasn't released in Europe until 2008.

### PICKS OF THE MONTH



**DARRAN**
**Odin Sphere Leifthrasir**
A great game gets given a truly stunning update that goes beyond the call. One day all HD remakes will be as good as this remarkable effort from Vanillaware.




**LUKE**
**Pokémon Go**
It took a while for it to get its hooks into me, but I'm there now. Hey, it gets me out and about more than usual, so that's something!



» [PS4] This lovely little chap makes you all sorts of delicious food – providing you have the ingredients.

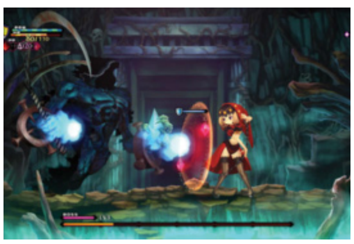
## ★WHY NOT TRY

▼ SOMETHING OLD
**DUNGEONS & DRAGONS: SHADOW OVER MYSTARA**



▼ SOMETHING NEW
**MURAMASA: THE DEMON BLADE**





them even stronger by mixing different strength Material bottles together.

*Odin Sphere* also has a farming aspect, and one that's massively critical to your levelling-up success. While new levels can be attained from fighting monsters, it's also possible to bolster your overall level by growing various plants and harvesting their fruit. Phozons are used to grow any seeds you plant, so you'll need to find a careful balance between levelling up your character and ensuring their abilities are varied enough to take on *Odin Sphere*'s ridiculously tough bosses. HP and XP are earned by consuming food, but if you combine different ingrediants to create recipes you'll be able to create even more sumptuous treats that will cause your XP to skyrocket. It's a neat concept that still holds up well today.

While the core gameplay of *Odin Sphere* can get a bit samey, the sheer amount of variety on offer means that levels never get too monotonous to play through. Yes you'll occasionally hit a brick wall that will cause you to return to an earlier chapter to ensure that you're of a suitably high level to challenge whatever is blocking you, but it rarely happens and just gives you another excuse to soak up the sumptuous looking visuals.

Each level of *Odin Sphere* consists of numerous stages. Free Stages allow you to simply navigate the level, looking for suitable goodies to create potions with, while Battle Stages pit you against the clock where you must defeat enemies as quickly as possible in order to receive an S ranking. Rest Areas on the other hand other a respite from fighting, allowing you to purchase new items or try new recipes via the travelling chef who resides there.

While *Odin Sphere*'s visuals really are breathtaking, it's the rich story that helped earn it so much acclaim on its original release. Told from the viewpoint of five playable characters, it weaves a complex tale that constantly intertwines as a number of different factions all attempt to gain control of a magical cauldron. It's nothing you've not seen before, but it's particularly well told here and tries to avoid most of the familiar tropes of the genre. It's also nice to see the viewpoints of each character and discover what they were up to while key events were taking place when you were playing as the other heroes.

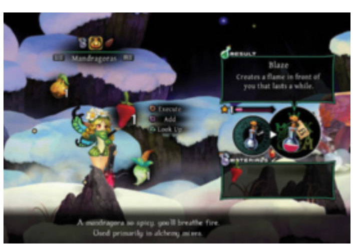
Completing the five chapters of *Odin Sphere* is quite an undertaking, but even that isn't the end of your journey. Once all five chapters have been completed, a sixth chapter, Armageddon, is unlocked. Completing this in the correct way (which is relatively straightforward, if not easy, due to the amount of guides online) unlocks the final chapter, Wheel Of Fate, which neatly ties everything up.

Vanillaware is rightfully proud of *Odin Sphere* and has done a massive amount of work to its HD update. In addition to reworking the visuals, *Odin Sphere Leifdrasir* features new enemies and map layouts, a rock-solid frame-rate, tweaked combat (meaning it's far less clunky than before) far better item management, a New Game+ mode, cross save across all systems and much more besides. Of course, if you do want to play the original PS2 in all its chugging, clunky glory, then that's included, too. *Odin Sphere Leifthrasir* is a truly remarkable update of a highly entertaining game that's as entertaining to play as it is remarkable to look at. ★

## In a nutshell

**The grinding will annoy some, but there's no denying that *Odin Sphere Leifthrasir* is an excellent JRPG. It's quite simply one of the best HD updates we've ever experienced.**

RetroGamer_Mag scored **9** for
Odin Sphere Leifthrasir
9
Follow our scores on JUST A SCORE








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# RETROROUND-UP

>> Every month we look at all the classics and latest releases that are available to buy or download

## Pokémon Go

» **System:** Android (tested) iOS » **Publisher:** The Pokémon Company
» **Cost:** Free (in-app purchases) » **Buy it from:** GooglePlay, AppStore

**Niantic's *Pokémon Go* is the most fun we've had with a videogame for years – and yet it's also riddled with issues.** The biggest problem is that the sheer popularity of Niantic's game (which is an evolution of its earlier augmented reality effort, *Ingress*) has meant that there are constant server issues, with Niantic either shutting off features to cope with demand or gamers simply being unable to log on. It's annoying, particularly as *Pokémon Go* is unplayable offline.

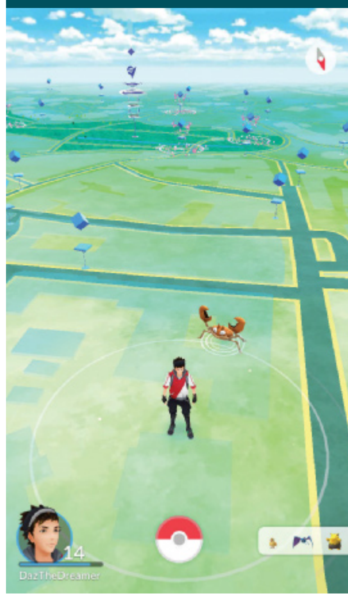
The game itself is harder to quantify and we're well aware that many won't even consider it a game in the conventional sense. While it's clearly a bare-bones experience what's here can definitely be described as gamey.

The clue really is in the title. *Pokémon Go* is all about going places. It's about getting off your arse and walking down to your local Pokéstop (points of interest where you can collect items that will help you in battles) fighting other trainers at your local Gym (where you can earn coins to grind towards new goodies) or simply trying to find new Pokémon to add to your Pokédex. When you do find a Pokémon you have to throw a Pokéball in order to catch it – and as the game progresses, the little critters become harder and harder to catch. There are a few tricks that can be used, but it's all very simplistic.

Ultimately, it's the impromptu social aspect which surrounds *Pokémon Go* that makes so much fun to play – something that Niantic can consider itself lucky for, as there is no social function that exists in the game itself. There's something strangely satisfying about discussing your latest catches with friends, sharing game information (critical as *Pokémon Go*'s instructions are terrible) and walking as far as you can to try and hatch eggs (which will hopefully net you even more impressive Pokémon).

The promised trading is absent at the moment, the servers are laggy and the gameplay can best described as simplistic, but we all just can't stop playing it.

### ✱ PICK OF THE MONTH



» [Android] The game's main screen shows you nearby Pokémon and useful Pokéstops.




» [Android] Trying to catch every Pokémon, like a true Pokémon master, is strangely compelling.

## Dino Dini's Kick Off Revival

» **System:** PS4 (version tested) PS Vita » **Buy it for:** £7.99 (digital) £14.99 (physical)
» **Buy it from:** PlayStation Store

Clearly rushed out to cash in on the fever of Euro 2016, *Kick Off Revival* is a empty experience that has very little going for it. *Kick-Off*'s controls are clever and complex considering they work off a single button. Sadly, unless you're a veteran, you'll not be able to appreciate this, as the instructions are awful (Dino had to use several charts to explain everything on Twitter) and the controls don't always do what you want them too. It's clearly unfinished, too. There are no red or yellow cards, no penalties, or extra time – the list goes on and on. There's online play, but it's ropey at best, making *Kick Off Revival* an embarrassing effort living off past glories. It shares many similarities with *Pokémon Go*, except unlike Niantic, publisher The Digital Lounge is charging money right off the bat for a clearly unfinished product.

4 — RetroGamer_Mag scored **4** for Kick Off Revival
Follow our scores on JUST A SCORE



» PS4] Looking for the ultimate *Kick Off* experience? You won't get it here. Try revisiting *Kick Off 2* instead.

## Monster Hunter Generations

» **System:** 3DS » **Buy it for:** £34.99
» **Buy it from:** Retail/online

This latest instalment in Capcom's long-running boss grind is a curious beast, at once serving as a greatest hits package that will resonate with veteran hunters and as a perfect introductory point if you haven't been hunting before. With four different Hunting Styles to customise move sets and play styles on each of the weapon classes, there's bound to be something that suits everyone and while a few of the returning monsters are odd choices (as if we ever wanted to see Plesioth again…), the rest – especially the four main new ones – are all really awesome fights. Arguably the best one on 3DS so far and therefore, by extension, one of the best in the series. Grab a ludicrously-oversized weapon and go turn gigantic monsters into new hats and shoes already.

9 — RetroGamer_Mag scored **9** for Monster Hunter Generations
Follow our scores on JUST A SCORE



» [PS4] Prepare to go toe-to-toe with creatures that from past and present *Monster Hunter* games.

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# Homebrew

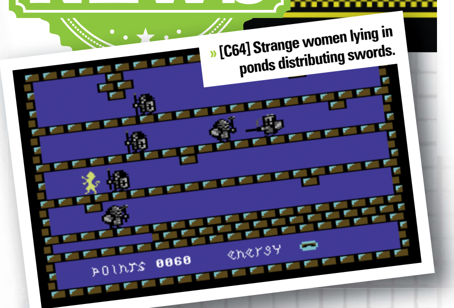
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Gaming NEWS



» [ZX Spectrum] Are you afraid of The Dark?




» [C64] Strange women lying in ponds distributing swords.




» [Amstrad] Out and about, braving the enemy fire.

## SWORDS, SORCERY AND SPACEMEN

The various members of C64 development team Sputnik World have been busy recently; a previous release of theirs was a fairly weak reworking of *Xain'D Sleena* that we covered back in issue 132, but now we have *Kabura*, another science fiction-flavoured run-and-gun affair which feels reasonably similar. But the programming behind it has advanced somewhat and, based on the quick test blast we've given it so far, the game itself is also a little friendlier towards the player as well.

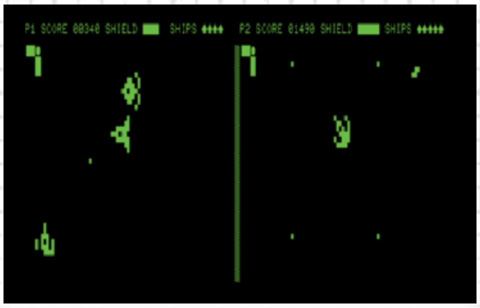
The second game, this time from a member of the group called Laddh, is a single-screen affair called *Excalibur* where the titular sword is wielded in order to deal with the patrolling enemies which require multiple strikes to see off. Being able to leap up or down means they can be surprised and the hero is also wearing armour, so he will survive a few parries from his adversaries. Players shouldn't expect a huge amount from either title – they can be found at Kikstart.eu/kabura-c64 and Kikstart.eu/Excalibur-c64 respectively – but there's some amusement to be found and both are a step forwards for the developers.

The politically-inspired Amstrad CPC platform game *Adiós A La Casta* which we mentioned in issue 152's news is soon to receive a sequel. There's a playable preview available to download from Kikstart.eu/casta-2-prv-cpc we're not entirely sure of the storyline this time since the blog entry we're linking to is a little sparse, but it appears to revolve around a shopping trip rather than collecting votes. The graphics have also gone through an overhaul – switching modes in the process to make things more colourful – and what exists so far plays reasonably well so a final version shouldn't be too far away from release.

Finally we have a rerelease in the form of Oleg Origin's *The Dark*, a *Wolfenstein*-style shooter for the Spectrum that came out in 1997. The story revolves around a mass exodus from the Land Of Winds after an invasion and one refugee's mission to return to his homeland to reclaim it. For most of the levels merely finding the exit is enough to progress through, but occasionally it'll be necessary to complete other tasks along the way and there are of course creatures roaming around to avoid or kill. The author's website can be found behind Kikstart.eu/the-dark-spec.

# NEW GAMES NEEDED

If you have a homebrew project you would like to see featured then please contact us at: **retrogamer@imagine-publishing.co.uk**



» [CBM II] Doing battle in the greenness of space.

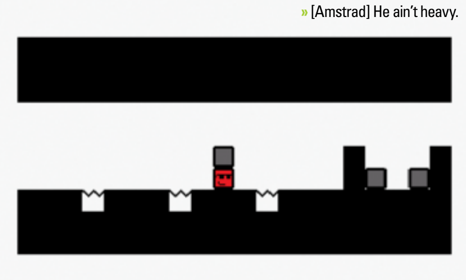
## BLOCKY SPACE BATTLES

The often-forgotten CBM II series of computers from Commodore have seen very little love from developers over the years, but these sequels to the PET series now have a homebrew action game to their name at least for the 80-column versions of the machine.

*Space Chase* is a scrolling blaster where one or two players fly around and try to blast each other to smithereens. The game's official website is SpaceChase.de where the latest build of the game and instructions on getting it running can be found.

> "Titular character has to rely on both brains and brawn to deal with potentially fatal hazards"

» [Amstrad] He ain't heavy.



## DEALING WITH IT

*Coolbox* is a puzzle game for the Amstrad CPC which the author Morri says is based on an old calculator game called *Block Dude*. The titular character has to rely on both brains and brawn to deal with potentially fatal hazards and solve tricky puzzles that were created by the Devious Dragon, often by lugging around handy blocks which are used to cover deadly spike pits or climb to otherwise inaccessible platforms.

The CPC Wiki forum thread where the game itself can be downloaded, head to Kikstart.eu/coolbox-cpc for the download.

# ·HOMEBREW HEROES·

**Developer Simone Bevilacqua has been working on games for a while now, and his new C64 title, Quod Init Exit IIm, caught our attention for the unusual graphical style and… well, the farting**





» [C64] Too many beans the night before!

**Roughly how long did *Quod Init Exit IIm* take to develop?**
Eight months. Curiously, some of the time was wasted in trying to optimise the scrolling engine, which was ready from before, as I had developed it for the ending of my previous game, *MAH*.

**And the rather… scatological humour, where does that come from?**
Sorry, that's a difficult-to-explain in-joke!

**You've used an unusual graphics mode, what work did that require?**
A lot of thinking, experiments, and reworking to create the map graphics and layout. Hiding the underlying grid and obtaining a colourful and varied look, with so few characters and such stringent colour constraints, is quite a puzzle which forces use of characters that blend nicely with one another and can be reused in different contexts. To make things even more complicated, due to memory and speed reasons, characters must also be assigned intrinsic functional properties, so they don't have to just look good but also function well.

**Were there any high or low points during the game's development?**
The worst low point was stopping to put another game of mine on Steam – *Huenison*, whose eponymous character appears also in this game, as the storylines of the two games are connected. There have been a couple of particularly difficult to find bugs that made me sweat quite a bit.

**What sort of feedback have you received so far from C64 gamers?**
So far, all the comments show appreciation or downright enthusiasm. Someone also made some specific comments on aspects like collision detection or the way portals work. Also, I have to say the average amount paid is quite generous – I take that as a tangible recognition of the game's quality.

**Finally, is there anything in the works that our readers might find interesting?**
Yes. *QIE II* was meant to have multiple levels, but then, at some point, I realized that I could squeeze a one-level version in 16K and participate to the RGCD competition: I missed the deadline, but still I thought that the end product was worth releasing. Now work on the 'Opimus' – i.e. 'Abundant' – version is being done. I have just started creating the second level to which I couldn't resist adding also a simple parallax effect.

Besides multiple levels, there will be bigger maps, possibly dynamically changing tilesets, context-relative music, more objects, hopefully more gameplay features - although that will be hard as the game already pushes the poor Commodore 64 almost to the max.

THE BIG INTERVIEW
· SIMONE ·
BEVILACQUA

» [C64] Exploring the upper reaches of Suinio.



## DO YOU REMEMBER?

Written by Stephen Broumley and published through *Atari User* magazine in 1988, *Gunpowder Charlie* is loosely inspired by *Bomb Jack* and focuses on the task of collecting, you guess it, bombs scattered around the screen within the time limit while trying to avoid the giant fireworks that are constantly flying past.

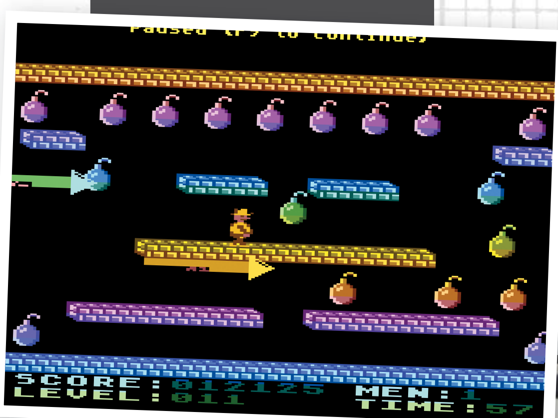
The levels offer a range of challenges, with some stages being simple dashes against the clock, others needing precise manoeuvring and a few that require a touch of lateral thinking. There aren't that many levels to work through and most players should be able to loop the game quite easily only to face them again but with more rockets to dodge! Kikstart.eu/gunpowder-a8 goes to the relevant page of Fandal's website where this simple, but playable and colourful, title can be downloaded.



» [Atari 8-bit] So many explosive devices, but so little time!



» [Atari 8-bit] Let me tell you about funk and justice for all.





» [C64] If pigs could fly, the price of bacon would go up.

# QUOD INIT EXIT IIM

» **FORMAT:** COMMODORE 64 » **DEVELOPER:** SIMONE BEVILACQUA » **DOWNLOAD:** KIKSTART.EU/QUOD2-C64 » **PRICE:** PAY WHAT YOU FEEL

The world of Suinio was once a delightful place, full of colour and life… and for the most part still is really, because the disaster that's befallen it doesn't have an effect on the flora. Instead all of the toilet bowls have been enchanted, which has reduced them to potties before scattering them around the land; the local police have nothing to go on but Cotechina the witch can remove the curse once they're gathered up, so Zampo the pig leaps into action.

There are hazards to avoid as well, including spikes, water and roaming enemies called Evil Masters – although our porcine hero will only be teleported back to the last checkpoint flag he reached if he 'dies'. Zampo also has a constant hunger and there's a gauge in the status area indicating how satisfied he is on that front which constantly decreases; should it drop to zero the game will be over, so collecting the food items which randomly appear such as fish or pieces of watermelon is essential since they refill the bar.

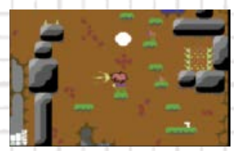
Some of the items help in other ways too, chomping down on a can of spinach will transform Zampo into the 'Pig Of Steel' for a limited period so he can crash through and destroy passing Evil Masters and the bottles of gassy soft drinks charge a second bar in the status area which is for the turbo fart which, as a painful-looking flame expelled from the far end of the pig's digestive system that is appropriately activated by the fire button, can be used like an afterburner to almost fly to otherwise inaccessible parts of the map.

*Quod Init Exit IIm* is a multi-directional scrolling collect-'em-up with some literal toilet humour and enjoyable, platform-based gameplay; it also utilises the C64's Extended Colour Mode – rarely used outside of demos – to offer colourful, high resolution graphics alongside full-screen scrolling and the price for all of that is a rather reasonable 'whatever you think it's worth' for the downloadable disk or cartridge images.

RetroGamer_Mag scored **8** for Quod Init Exit IIm

8

Follow our scores on JUST A SCORE



» [C64] Too much fizzy pop can be really bad for a young pig!



» [C64] Waiting for the right moment before trying to throw the switch.



» [C64] Swept away by you, and now I feel like a fool.

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# BLOCKY SKIES

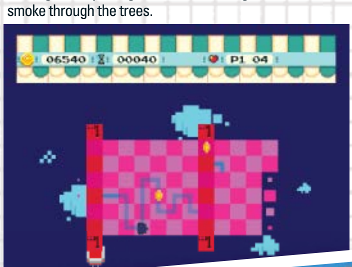
» **FORMAT:** COMMODORE AMIGA » **PRICE:** FREE
» **DEVELOPER:** ENABLE SOFTWARE
» **DOWNLOAD:** BLOCKYSKIES.COM

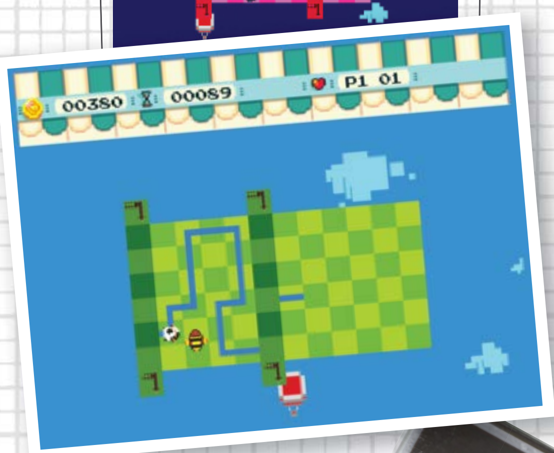
Hovering high in the Blocky Skies are a series of pathways which, for anybody brave enough to travel along them, can be both financially rewarding and fatal. Each pathway is divided into chunks and there's a safe route to follow which is only visible for a short while before fading away. The level also scrolls horizontally with the tiles on the left-hand edge falling away, so dawdling too long could prove deadly too.

A good memory is required to complete a stage and positioning of the coins will sometimes help on that front; there are also occasional power-ups which show the path for a second time or automatically complete the current area when activated as well. The graphics are cute and colourful – for some reason we enjoyed controlling the little cow most – and the soundtrack is noteworthy too, wrapping up a tough but entertaining package nicely.

8 RetroGamer_Mag scored **8** for Blocky Skies
Follow our scores on JUST A SCORE

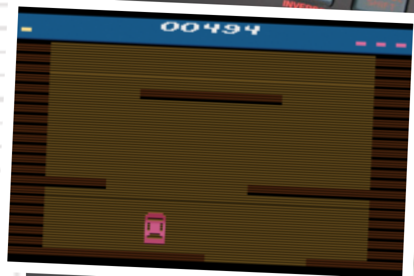
» [Amiga] In my thoughts I have seen rings of smoke through the trees.





# SPACE INVADERS ARCADE EMULATOR

» **FORMAT:** AMSTRAD » **DEVELOPER:** 40CRISIS
» **DOWNLOAD:** KIKSTART.EU/INVADERS-ARCADE-CPC » **PRICE:** FREE



Those pesky Space Invaders don't know when to stop and the latest victim of their relentless assault from beyond the stars is the Amstrad CPC. Taito's original code and other assets are taken directly from the ROM images so, gamers providing those files can then click on a Windows-based program which almost instantly generates both disk and cassette images, ready to be played.

*Space Invaders* itself shouldn't need any introduction the iconic aliens trudging back and forth across the screen and moving down after each pass, the cannon and it's four protective barriers and the bonus UFO are present and correct. So although it does have to be noted that the sound is a little 'off' (at least in the version we've been playing), the all-important gameplay is spot-on and Amstrad CPC owners can enjoy that authentic arcade experience in their own homes.

8 RetroGamer_Mag scored **8** for Space Invaders Arcade Emulator
Follow our scores on JUST A SCORE





» [Amstrad CPC] Things are starting to look very bad for the Earth...

# RALPH 4

» **FORMAT:** NES » **DEVELOPER:** PUBBY » **DOWNLOAD:** KIKSTART.EU/RALPH-4-NES » **PRICE:** FREE

Ralph is, judging by his outfit, a wizard who needs to navigate through a series of levels while collecting diamonds. And standing – or more accurately, sitting – in his way are some alarmingly cute teddy bears which, despite their harmless appearance, are deadly! Most of the teds are static and moderately easy to avoid, but some patrol the corridors or move in large circles, so navigating between safe spots will sometimes take a combination of forward planning and dexterity

We did enjoy playing this game and finishing some of the more challenging stages is a serious adrenaline rush, but it does get uncomfortably difficult quickly. While there aren't any lives to worry about and the player's success is instead judged on how quickly they can complete all of the stages, more easily frustrated players may want to approach *Ralph 4* with a little caution and, preferably, a rugged control pad.

7 RetroGamer_Mag scored **7** for Ralph 4
Follow our scores on JUST A SCORE



» [NES] These teddy bears keep going round and round, but it's not a garden.



» [NES] Making a dash for safety between the lethal, rotating bears.

## ROUNDUP

It probably won't come as much of a surprise, but Atari 2600 title *Drive!* is an action game about driving! To be a little more specific, it's a fast-paced, vertically-scrolling affair and the player's small red car is controlled using a paddle rather than the joystick. A thread with the ROM and further information is parked behind Kikstart.eu/drive-2600.

Staying with Atari but moving over to the 5200, a port of the Polish Atari 8-bit game *Robbo* has recently materialised. This is an action puzzler with a few similarities to titles such as *Chip's Challenge* where a little robot works through puzzles to collect a quota of bolts from each stage. Kikstart.eu/robbo-5200 goes to the Atari Age thread and there's an Atari 7800 conversion under way at Kikstart.eu/robbo-7800, too.

# MAILBAG

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## STAR LETTER

### YOUTH VERSUS EXPERIENCE




» [C64] Apparently, D O'Conner hasn't jumped hurdles since the days of *Daley Thompson's Decathlon*. He's still pretty good at it, mind.

Dear **Retro Gamer**,
When I was at a wedding reception recently, I noticed several youngsters that were crowded around a table and having some fun. One of them had a tablet and they were playing a sports game – and doing pathetically at the hurdles.

All had a go and they failed miserably. I asked what they were playing and, when they saw my interest, they invited me to play, no doubt believing that an 'oldie' like myself would be much worse than they were.

Naturally, I accepted their challenge and not only jumped every hurdle successfully, but won the race easily. Everyone looked on in awe, even more so when I told them I had never played the game before.

Then I said I had not jumped hurdles since *Daley Thompson's Decathlon* on the C64, (one of the attendees, fortunately, knew what that was), and I think I gained some serious respect.

The moral of this story was, for me, that while we cannot teach an old dog new tricks, perhaps some of the new dogs can do with learning a few old tricks…
D O'Conner

**If there's anything you come to learn in this line of work, it's that old games really are generally harder than today's games (although it's worth noting that there's a niche market for sadistic challenges in the modern environment). There are many reasons for that – sometimes it's bad design, sometimes it's an honest challenge designed to kick you off an arcade machine quickly. Either way, if you make a habit of playing older games, you'll probably develop strong skills in the process.**

**In any case, it's good to see you sticking it to the youngsters and proving that age is no barrier to being a skilled gamer. Have a prize.**




» [Arcade] Could *Xain'd Sleena* be the answer to one of the more confusing questions we've had recently?

## SPACE CASE CLOSED?

Hi **Retro Gamer**,
I was very intrigued by Paul Davidson's vague description and request to identify the Eighties arcade game in **Retro Gamer** Load 156 where every level bought you to a new planet.

It sounds very much like a game I spent hours looking for when retro gaming became a big thing a decade ago and whilst he says it's not *Phoenix* (which suggests it may be a early Eighties shoot-'em-up) I'm willing to have a go and suggest it sounds the shooter/platformer called *Xain'd Sleena* from 1986 by Technos. Before you started each level you selected which planet you would take on and you saw your ship flying off into battle.

I believe this was called *Solar Warrior* in UK arcades. It was a very rarely-seen game but one that really stood out for me, hence the hours I spent searching out its name many years after I spent so much time playing it a kid.

It's a bit of a wild guess, but I hope it helps.
Nick Child

**Thanks for the contribution, Nick! This is definitely the most unusual suggestion we've received so far, so we thought we'd pick this letter to print. Other readers have suggested the likes of *Space Harrier* and particularly *Gyruss*. (Also, apologies to the reader who sent the original query, Bas Van Nuland – gremlins crept in and duplicated another reader's name!)**

## ZERO IDEA DILEMMA

Dear **Retro Gamer**,
I enjoyed **Retro Gamer** Load 156, especially the article on *Out Run*.

However, the graphics which caught my eye were on page 71 within the Game Boy Advance piece. Would you please tell me which game is shown on the bottom row of screenshots, second from the right, which has a robot towering over green figures with the shaft of sunlight shining down?

Thank you,
Paul Butler

**Good news Paul, the screenshot in question comes from the opening sequence of *Mega Man Zero*. If you want to try it for yourself, you have a few options in addition to the original GBA cartridge – it's included in the *Mega Man Zero Collection* for Nintendo DS, and is available via the Wii U Virtual Console service, too.**

## A BIZARRE DISCOVERY

**Retro Gamer**,
I've been looking through some of my old Spectrum games and came across *Rockstar Goes Bizarre*. I've heard of *Rockstar Ate My Hamster* but never the game I have… Mine is in a plastic box, two tapes and a set of four stickers. Research shows only ten copies were ever made over three platforms but that's all I know. Everyone I've spoken to has never heard of it. Could you please shed some light on this for me, and do you know of any other copies out there?
Richard

**What you've got there is a very rare item indeed. *Rock Star Goes Bizarre* is a special edition of *Rock Star Ate My Hamster*, produced for a competition in *The Sun* – in fact, it's named after the newspaper's showbiz column 'Bizarre'. Unlike the original game, the front cover**



» [GBA] *Mega Man Zero* is an attractive 2D game that caught Paul Butler's eye.

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**actually uses the true masthead for *The Sun*, and it's got some in-game differences too – a new loading screen and extra characters. What an excellent find!**

## TURNING TRICKS

Hello **Retro Gamer** team,

I was wondering if you were ever going to do a tips and tricks section in your magazine.

While there are millions of online resources for game cheats and walkthroughs of games, have you ever considered doing a monthly bit covering this? It was one of my favourite parts of old-school gaming magazines, just in case an infinite lives cheat for *Alien 3* on Mega Drive ever got printed (it never did).

Thanks for the great magazine.

Chris Lebeau

**We sometimes include playing tips as part of our Ultimate Guides and we've talked around the subject of cheats in the past, most recently with The Rise And Fall Of Cheats in issue 128. However, we've never included a tips section to the magazine and it's largely for the reason you mention – the internet is a great resource for cheats, guides and tips. As such, it'd take very strong reader demand for us to consider adding such a section.**

## AND JUSTICE FOR ALL

Hi **Retro Gamer**,

Loved the article on *The Biz*. I didn't know Chris Sievey made games. Really cultural stuff from the Spectrum days. More from Kim Justice, please.

Thank you,

Tom Wedley

**Hi Tom, we're glad you enjoyed the Minority Report. You'll be pleased to know that Kim Justice is back in this issue for an Amiga 500 Minority Report.**



» [ZX Spectrum] We've only got the non-Bizarre version of *Rock Star Ate My Hamster*, sadly.





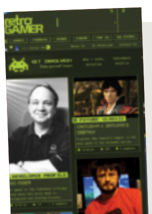
» [Mega Drive] There isn't an infinite lives cheat for *Alien 3*, unless you have a cheat cartridge to hand.

## DISCUSSED THIS MONTH

### Pokémon Go

Just like everyone else, we've been swept up in the latest mobile gaming craze, which has seen Bournemouth infested with Drowzees. Drew and Darran have taken up the Team Mystic banner, Sam is on Team Instinct and Luke has pledged his allegiance to Team Valor. Nick has yet to decide…





# From the forum

» www.retrogamer.net/forum

Every month, **Retro Gamer** asks a question on the forum and prints the best replies. This month we wanted to know…

## What's your favourite handheld console, and why?

**bounty bob**
Tomy Tronic 3D Tron game. Got this when I was 12 for Christmas. A few years later my sister nicked it and moved to the States. It became their toilet game. She says she hasn't got it any more, but I'm sure she hides it whenever we visit.

**kiwimike**
I think most fondly of the Neo-Geo Pocket Colour, and Atari Lynx, for their small, but superb, libraries of quality games.

**antsbull**
The 3DS – it's the first Nintendo handheld that was powered enough to comfortably handle stuff like *Ocarina Of Time*. On top of that, the library, including the DS compatibility, is incredible.

**DRS**
I'm aware I may be on my own with this one, but mine is the Microvision. Playing *Block Buster* in the back of my dad's Renault 5 in 1979 felt like I was living in the future.

**dste**
DS Lite as loads of great games across numerous genres and can also play GBA games.

**theantmeister**
The classic original Game Boy and *Tetris*.

**Hiro**
My first love: the GP2X. Being a retro gamer having the chance, in 2006, to run all of those console and arcade emulators and to play *Out Run* on the train, was a blast.

**emdkay**
The GBA SP was and still is my favourite handheld. It was my first handheld that automatically protected its precious screen when not in use!

**paranoid marvin**
PSP – thanks to *ScummVM*, I can (legally!) play all my favourite Lucasfilm games on the move.






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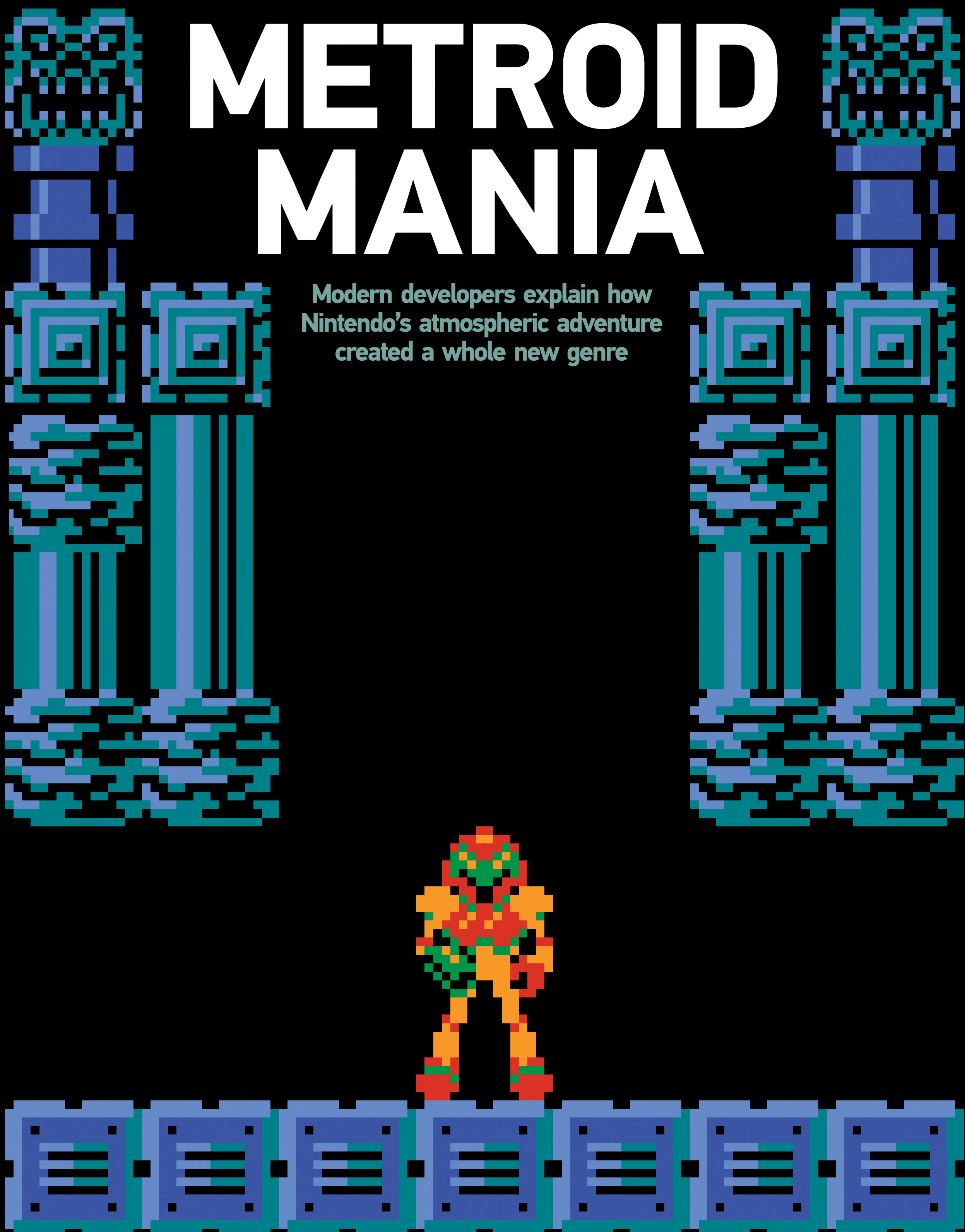
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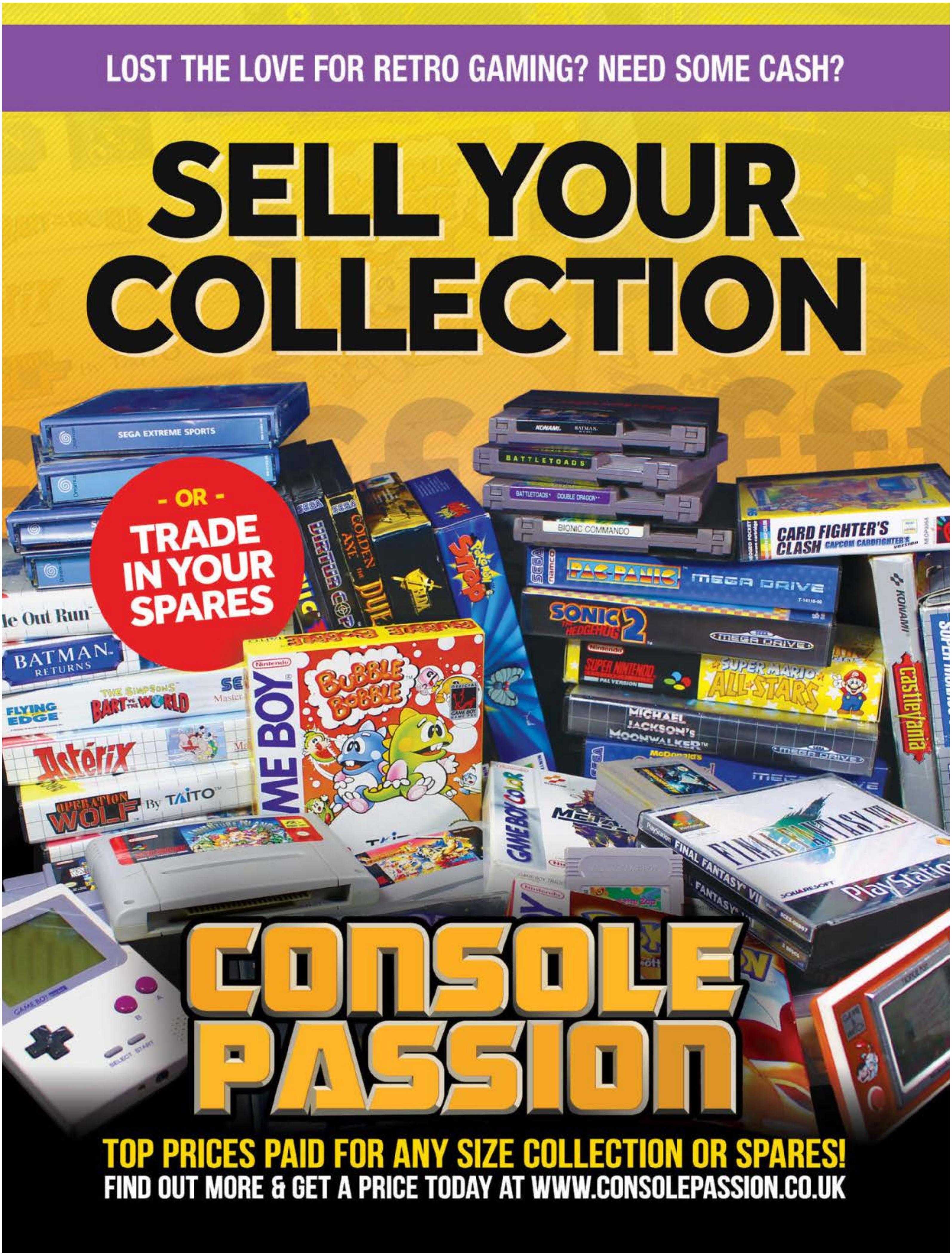
# METROID MANIA

Modern developers explain how Nintendo's atmospheric adventure created a whole new genre



## ALSO INSIDE

Neo-Geo CD, Codemasters, Worms, Horace Goes Skiing, Pang, Crash Bandicoot, NES Mini, Hall Of The Things, Snapper, Master System, Jim Huether, Death Stalker, Super Game Boy and much more


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# ENDGAME




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01

» You've been fighting the dastardly Rugal and have seemingly defeated him, but he's not beaten – just disappointed. Apparently, despite your victories in the tournament, you aren't a tough enough challenge for SNK's most notorious boss.




02

» A figure emerges atop the castle, and it's one feared by street fighters the world over. However, Rugal has been expecting Akuma, and has no fear of the man whose murderous intent corrupts the atmosphere around him.




03

» Since he's got someone worthwhile to challenge now, Rugal's done with you. He will at least extend some courtesy by allowing you to leave with your life. It's a good deal – normally, he keeps weaklings like you as trophies.



04

» As you descend from the castle roof, this clash of the titans causes a massive explosion that destroys the top of the structure. If one combatant can claim the power of the other, it could spell doom for the entire human race. If only you had been a better fighter...




05

» Our humble narrator concludes by ruminating on whether this event is the beginning of the end. One thing's for sure: while few stand to benefit from this struggle for individual power, the result will mean that we all face an extraordinarily uncertain future. All we have now is our regret...

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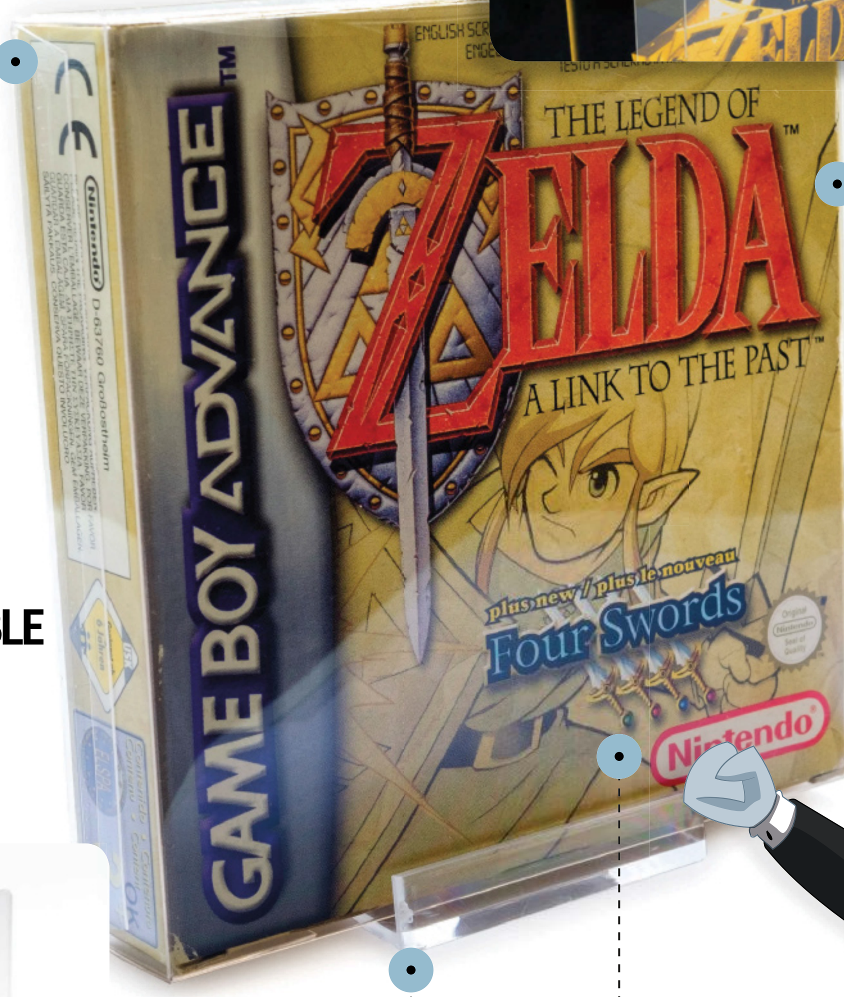
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